

FROM SOUND TO SCRIPT: INVESTIGATING THE PHONOLOGICAL AND ORTHOGRAPHIC DIMENSIONS OF SPELLING ERRORS IN UNDERGRADUATE ESL WRITING

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Abstract

Spelling is a crucial part of L2 acquisition and is an important part of the effective development of written communication. Spelling problems are commonly experienced by ESL/EFL students because of differences between the phonological and orthographic systems of their first and second language. Spelling is deemed by Mahmoud (2013) to be one of the basic components of the written language, and Allred (1990) states that spelling skills can affect the effectiveness and creativity of a writer. The difficulty that English language learners encounter is the complex relationship between phonemes (sounds) and graphemes (letters or letter combinations) and sometimes results in spelling errors. The challenges might be because of similarity between English and Urdu phonemes, and/or the difference in orthographic systems of English and Urdu for Urdu learners. Phonological difficulties and irregularities in sound-letter relationships add to spelling problems. To address these challenges, the current study offers a few suggestions on how to enhance learners' spelling skills, such as frequent spelling drills, development of phonemic awareness, explicit spelling of phonemic and morphemic patterns, efficient use of the dictionary, mnemonic strategies, and extensive reading. These strategies can assist learners in making spelling sense, reinforcing sound-letter correspondences, and developing their written communication skills.

1. INTRODUCTION

Spelling is generally considered to be the way in which linguistic sounds are represented by an appropriate sequence of letters in written language (Santoro et al., 2006). Peters (1985) also sees spelling as more than a relationship between sound and letter; he explains spelling as the "ordering" of letters to make a meaningful word. The definitions suggest that spelling is a complex linguistic activity involving learners' understanding of the relationship between phonological forms and their orthographic forms. Spelling can be especially difficult as it requires many aspects of linguistic knowledge. Spelling is a complex skill that requires a number of interrelated areas of knowledge, such as phonological knowledge, morphological knowledge, semantic knowledge, and orthographic knowledge, as stated by Moats (1984) (as cited in Santoro et al., 2006). The

phonological knowledge helps them recognize and represent speech sounds, and the morphological knowledge helps them to understand a word's structure and meaningful parts. Semantic knowledge helps to identify distinctions in meaning, orthographic knowledge involves conventions and patterns of written forms. The interplay of these linguistic factors shows the complexity of learning spelling, and gives us a starting point to consider the challenges students face in learning how to spell in a second or foreign language.

Definition of Error

Spelling is part of written language and takes the form of correctly expressing linguistic units by means of the proper order of letters. Spelling can be called "representing the sounds in a language with a string of letters" (Santoro et al., 2006) or "organizing the letters into meaningful words" (Peters, 1985). In the light of these views, spelling is seen not just as the conversion of sounds into written symbols, but as the interplay of a number of linguistic processes which help learners to generate conventional and meaningful spellings. Spelling is a special area of difficulty because it involves several, but interrelated, aspects of language. Spelling is a complex skill characterized by multiple knowledge areas, such as phonological knowledge, morphological knowledge, semantic knowledge and orthographic knowledge (Moats, 1984 cited in Santoro et al., 2006). Phonological knowledge supports students to recognise and represent sounds in spoken language, while morphological knowledge supports their understanding of meaningful parts of words such as suffixes, prefixes and roots. Semantic knowledge helps to understand the meaning of words, and orthographic knowledge helps to understand the conventional patterns and rules of written language. These dimensions work together to help the learner identify sound-letter relationships, word structures, meaningful relationships, and apply known spelling conventions. The correspondence between sounds and letters is not always consistent, however, especially in the English language, there are several different ways to write the same sound and a single sound can be represented in many different ways. Learners need to have their phonological awareness enhanced to produce accurate spelling but they also need to learn the meanings of words, English orthographic conventions and the morphological structures. This complexity is particularly relevant in the field of second- and foreign-language learning, where variations in the sound systems and writing conventions of the first language and the target language can cause spelling problems. Therefore, an understanding of the concept of spelling as an integrated linguistic process is important in providing a theoretical basis for the study of the nature, error sources and error patterns in the spelling of ESL and EFL learners.

Error Analysis

Error analysis has acquired a lot of attention by the modern-day scholars and researchers. With the advent of modern scholars and researchers, error analysis has received a great deal of attention as an important means of analyzing the problems faced by learners in learning foreign languages. According to James (1998), error analysis is the identification, description and explanation of the errors made by learners to get an insight into the nature, frequency, causes and implications of the errors in language learning. In the field of language learning, errors are not simply signs of learners' restricted language competence but important clues to their developing knowledge of the target language, as well as the target language issues that need further language instruction. Errors made by learners can be analysed systematically so that the teachers can see the pattern, the possible cause of the problem and then find a suitable remedial strategy. Wasowicz (2007), in the context of spelling, highlights the importance of errors as a means of gaining insight into learners' language knowledge, such as their knowledge of word meanings and language structures. Likewise, systematic analysis of spelling mistakes can aid teachers in identifying aspects of spelling that are causing problems for learners,

and differentiate between various types of mistakes. Kohnen et al. (2009) emphasize the need to recognize spelling errors for instructional planning, and to decide how to help learners in their future development. The Department of Education and Community Services (DECS, 2011) also stresses the importance of teachers to analyse learners' written compositions and to discuss learners' strategy for improving their spelling accuracy, while observing common errors that occur in writing. Therefore, it is crucial to identify and analyse spelling errors at the right time, so that feedback and correction can be given to address errors before they become habitual patterns in learners' writing. In general, error analysis can be used as a diagnostic tool to determine students' weaknesses in spelling skill, as well as a pedagogical tool that can be used for determining the students' learning objectives, developing remedial instruction, and enhancing students' written communication.

Writing Composition

In second-language acquisition (SLA), all four basic language skills—listening, speaking, reading, and writing—are developed. These skills are interrelated and are all a part of the learners' communicative competence, but each call for the learning and use of particular linguistic knowledge and cognitive processes. Of these, writing is the most challenging, as it involves learners to plan ideas, use appropriate vocabulary, apply grammatical rules and follow the conventions of written language, such as spelling, punctuation and capitalisation. Spelling, especially, is an integral part of writing skills and is very important as it adds clarity, accuracy and comprehensibility to written communication. Poor spelling can make it difficult to convey meaning, affect legibility of written texts and affect the quality of learners' work. In this way, spelling problems are deserving of systematic study, especially in second and foreign-language learning situations where the learner has to learn the rules of writing in a second, foreign or additional language that can be very distinct from those of the first language.

Spelling skills are not simply a matter of memorizing the spelling of single words. Learners should learn to recognise phoneme-grapheme correspondences (smallest phonemic unit and the grapheme that represents it), understand the morphology of words, their meaning and the orthographic conventions. Phonological awareness is a great base for spelling, but the connection between pronunciation and representation in the written word is not always consistent in English. The letter k in the word 'know', for instance, is silent, so the phonics system does not always give enough clues to the conventional spelling of words. For learners whose main approach to writing unfamiliar words is from phoneme-grapheme correspondence, such irregularities can be problematic. Moreover, the phonological and orthographic systems of the learners' L1 and L2 may contribute to his/her spelling problems, especially when he/she carries over familiar spelling patterns or pronunciation conventions of L1 into L2. The difficulties identified here suggest that the study of spelling should not be limited to a mechanical analysis of the processes of writing but should be considered as a complex linguistic process in which the knowledge of phonological, morphological, semantic and orthographic structures plays a role.

In this regard, error analysis offers a systematic approach to analysing learner's errors and learning language competence. In contrast to seeing spelling errors merely as a sign of failure, error analysis views them as potentially revealing signs of learners' linguistic knowledge, learning strategies, and difficulties. By identifying and categorizing common errors, researchers can examine learners' patterns of errors and explore the linguistic features that might be affecting the pattern. This analysis may also assist teachers to differentiate between various types of spelling problems and apply teaching techniques that are appropriate to learners' level. While errors by themselves do not indicate the cause of errors, a systematic analysis of error patterns

can offer a useful starting point for further investigation and teacher decision making. Spelling error analysis is very significant in academic writing where the students are supposed to communicate specialized knowledge to others accurately and cohesively. For engineering, students are required to show something in written assignments, reports, exams, and other academic communication to show their knowledge of technical concepts. They may have poor spelling and this can cause their work to be unclear or unrepresentable despite having a good knowledge of the subject. Examining their spelling errors can then help to reveal common problems and develop a greater awareness of the kinds of problems they face in composing their written English. Based on this, the present study reviews spelling errors that are found in the written texts of engineering students, spelling error patterns, and the classification of these patterns, and if possible, the linguistic factors that could account for the spelling errors. The systematic analysis of these errors aims to help to gain a deeper understanding of the problems with spelling in the target language learning environment, and to offer empirical support for the creation of more specific strategies for spelling education and academic writing assistance.

Literature Review

Qasem (2020) studied the sources of spelling errors and offered possible remedies to help enhance the proficiency of written English for Arabic-speaking learners. The study revealed five main sources of spelling problems: first language interference, orthographic/morphophonological differences, irregularity of English spelling, and lack of motivation to practise spelling. The above factors indicate that spelling problems might be due to a mix of linguistic, orthographic and motivational issues. In terms of remedial measures, Qasem highlighted the significance of teachers to develop learner's ability in spelling. The teachers were encouraged to use a systematic and creative method in teaching spelling, to set up interesting classroom activity and to give proper correction and to motivate the learners to practise spelling regularly. The recommendations focus on the need to effectively address learners' spelling difficulties by using explicit teaching with motivational techniques.

In the same way, Othman (2018) investigated the most frequent spelling mistakes in the university written compositions of 45 university students in University of Tabuk, Saudi Arabia. The errors identified in the study were divided into four types, namely: substitution, omission, transposition and insertion errors. The errors by substitution were the most common (36.7%), followed by omission errors (33%), transposition errors (15.6%) and insertion errors (14.4%). The results of this study showed that spelling problems can occur in various ways such as substituting, omitting, transposing, and adding letters. Many substitution and omission errors indicate that some attention needs to be given to assist learners to identify the correct sequence of letters and form the correct words. But, to identify error patterns, further investigations to determine the linguistic or cognitive factors are needed. Dada Esther M. Spelling Error: Causes, Influence on Students' Performance in English Language Essay Writing and Strategies for Correcting Them (2015) studied the spelling errors that occur in students written performance and looked into the possible causes and implication of the errors in students' essay writing in English language. Several types of errors were identified in the study: omission, grapheme representation errors, addition errors, homophonic errors, letter order errors, prefix and suffix errors, incorrect abbreviations, letter reduplication and using the wrong apostrophes. The findings showed that omission errors were the highest type at 49% of errors made. Other errors reported were errors due to faulty grapheme representation (17.91%), addition (10.35%), homophonic errors (4.65%), letter-order errors (3.83%), incorrect use of apostrophes (1.14%), incorrect abbreviations (0.83%), and prefix and suffix errors (0.41%). The study correlated carelessness, lack of attention to spelling rules, negative

attitudes towards spelling, interference of English and Arabic with spelling difficulties. It also noted the concerns raised by lecturers on the constraints faced in the syllabus and the administrative constraints, and the lack of knowledge of spelling by some teachers. The above observations indicate that factors relating to the way spelling is taught and the educational context in which it is taught can also affect the learning of spelling. However, the institutional and teacher-based explanations need to be understood and substantiated with other evidence before they can be extrapolated to other educational settings.

Asif, Zhiyong and Azhar (2019) explored the issue of spelling errors among online learners in Pakistani context in the context of Virtual University of Pakistan (VUP) discussion activities. They studied online communication where they looked at the nature of spelling errors and what factors were related to the errors. The results showed that there were some spelling errors that could be detected and corrected by spelling-checking software. Errors were however still made when learners entered text directly into the discussion platform. The following error categories were reported: consonant substitution, vowel substitution, inappropriate spacing, consonant omission, consonant doubling, errors in inflectional endings, inconsistent use of spelling rules, errors in letter reversals, errors in tense, and errors of key adjacency. The researchers also pointed to cases where the wrong spacing led to the wrong word boundaries and thus the wrong meaning of the sentence. The results show that the spellings errors in digital communication can relate to both knowledge of the language and to typing activities and to the technical context in which writing is produced. They also propose that spelling correction software might be helpful but cannot be a substitute for the learners' knowledge of conventions and morphological structures.

Uzair-ul-Hassan (2012) discussed the problems of learning to write English, and compared the views of the male and female learners. The study indicated that female students had more problems with vocabulary and spelling than did male students. It also found that there was a relationship between spelling and grammatical problems, such that when spelling is problematic, written language production is also problematic. The findings of the study suggested that teachers need to employ an eclectic teaching method, offer guidance for first-language interference management and facilitate the learners' spelling rules and word form learning. The results highlight the need to consider spelling in the context of writing ability as a whole rather than separately. Incorporated into this reported gender discrepancy, however, are the limitations imposed by the sample, research design, and measurement used in the study; and any discrepancy must be considered in relation to these limitations. Also, Muhammad Akbar, Habibullah Pathan and Waqar Ali Shah (2018) explored the writing challenges faced by SLLs in a public sector college in Hyderabad, Sindh, Pakistan. The study adopted the quantitative research method to discuss the causes of students' difficulties in English writing. The results revealed that students' spelling habits were affected by their use of abbreviated and shortened words in internet communication and text messaging. This finding draws attention to the possible relationship between informal digital communication and the development of conventional spelling habits in academic writing. The researchers suggested some corrective interventions such as using eclectic and communicative methods of teaching, creating practical strategies for mitigating L2 interference, and reinforcing frequent spelling sessions and the study of spelling conventions. The recommendations focus on the importance of instructional strategies that match the language learners use in the real world with the formal language needs of writing in the academic context.

Reviewed studies collectively show that, for ELLs, spelling errors are related to a variety of linguistic, cognitive, motivational, technological, and instructional factors. First-language interference and the differences between linguistic and orthographic systems become significant issues, especially for learners with first-language backgrounds which are significantly different from that of English. The link between the sounds of English

and the way they are written is not regular and can add to the difficulty of spelling acquisition. Furthermore, the attitudes of learners, the opportunities for their practice, the way the language is taught, and what they hear of informal digital communication can all affect the acquisition and use of conventional spelling knowledge. The research also shows that there are some differences in the nature of spelling errors made in different educational settings. Errors of substitution and omission occurred in some investigations (but not others), while others noted problems with letter addition, transposition, grapheme representation, morphological endings, word spacing, and the use of digital keyboards. It shows that spelling errors need to be studied and analysed in a systematic way and not assumed to be similar for all learner populations and with identical patterns.

In terms of instructional implications, the literature reviewed underscores the need to explicitly teach spelling, make frequent spelling practice a habit, provide corrective feedback when needed, make learning spelling fun in the classroom, and correct first-language interference when needed. Digital spelling tools can also help learners detect some of the errors, but only if the learners are able to recognize and use the appropriate spelling conventions. The results of these studies are convergent and are used to support an integrated method of spelling teaching, which takes into account the linguistic knowledge needed for accurate spelling and the conditions of the learning process which influences the development of this knowledge. Although all of these contributions have been made, the studies reviewed differed in the number and characteristics of their participants, the educational context, the methods used in the research, and the systems for categorizing errors. Thus, their results cannot be extrapolated to any other group of learners. This variation underscores the importance of studying spelling errors in specific contexts, determining their main category, their possible linguistic origins and the implications they have for written communication. For this reason, the present study identifies and classifies the common error patterns in students' engineering written compositions by spelling errors. The purpose of the study is to add to the understanding of spelling problems from a context sensitive point of view and to inform in developing suitable measures to enhance the accuracy and quality of spelling and academic writing in the context of this study.

Hypotheses

- Students spelling errors influence their writing work.
- The spelling errors impact on the writing compositions of EFL students.
- The spelling errors impact on the overall grades of the EFL students in their exam papers.

Theoretical Framework

Corder's Theory of Error Analysis

Corder's error analysis theory provides a theoretical foundation for the study of the process of language learning knowledge development. Corder (1967) made a distinction between errors and mistakes and described how errors made by the learners can be used as an indicator of their developing linguistic competence. In this terminological context, the typical stages of errors have been described as (Corder, 1973): pre-systematic, systematic, and post-systematic. The stages indicate various stages of understanding of the language rules of the target language.

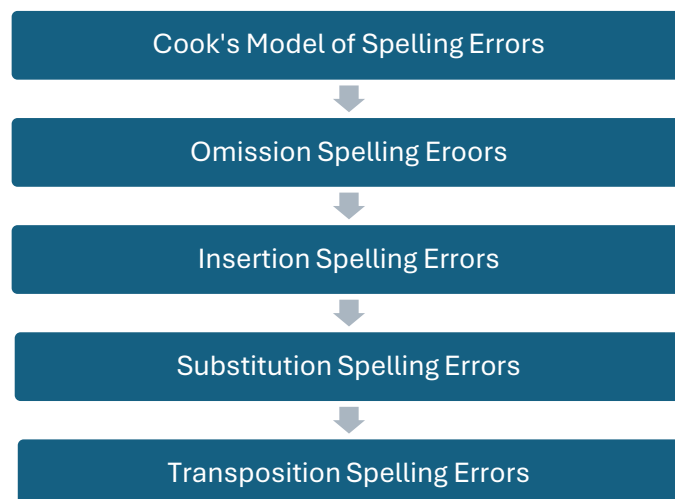
The pre-systematic phase is when learners are not yet able to be specific about a given linguistic rule or structure. Learners at this stage can generate incorrect forms because they lack knowledge of the language feature in question and haven't created a regular understanding of the rule. As a result, they are not able to

articulate what went wrong in their mistakes or what underlies the correct structures. In spelling, students might not spell words that they don't know, not knowing the sound-letter rules or conventions that apply. In the systematic stage, the learner has an emerging, but still limited awareness of the target language's rules. Learners can apply their knowledge consistently but incorrectly, making errors which show a discernable pattern in their developing language system. These errors may not yet be correctable on their own, but their answers are not random; a learner's answers may be a reflection of his or her current best guesses about how the language works. In the domain of spelling, a learner might use an incorrect spelling pattern for a word, which they think is similar to one that they mastered, but has never internalized the spelling-morphology or the spelling-orthography rules for that word. The post-systematic stage is when students have more knowledge of the relevant language system and can be able to detect, explain, or correct their mistakes. They might not use this knowledge in spontaneous production, however. These inconsistencies can occur when learners do not notice what they are writing, cannot access the appropriate form in their writing, or do not use the appropriate rule when writing. Spellers can have correct spellings and use them correctly in one context and not in the other. Errors at this stage, therefore, might be due to the inconsistent use of the newly acquired knowledge and not necessarily because of a lack of knowledge.

These three stages demonstrate how learners' errors can be related to various levels of developing linguistic knowledge. The framework is relevant to the present study because it offers a means of explaining spelling mistakes in terms of learners' knowledge and use of spelling rules of the English language. The study can investigate and examine the regularity of spelling errors to determine if certain errors are a result of limited knowledge, if they are a result of a systematic, but incorrect, application of the rules, or if they are a result of inconsistent use of spelling knowledge that may have been in the learner's repertoire. However, the stages should not be determined by checking for written errors alone; other evidence such as interviews, correction tasks, or think aloud activities may be needed to identify learners' knowledge of the rules and to demonstrate how well they can identify and correct their own errors.

Conceptual Model

In the present study, the researcher applied Cook's model of spelling errors (1999) in which spelling errors are being classified into four different categories like omission, insertion, substitution, and transposition. However, this model is quite useful to measure the most frequent spelling errors ESL learners do while writing. Below is given the shape of Cook's spelling error:



Variables of the Study

Variable Name	Source	Measurement
Writing Composition is an independent Variable	Corder's Theory (1973)	Quantitative
Spelling Errors is the dependent variable	Corder's Theory (1973)	Quantitative
Types/causes/impact of spelling errors is another dependent variable	Corder's Theory (1973)	Quantitative

Research Methodology

Research Design

The present study utilized a quantitative type of research to explore the spelling errors made by the undergraduate students of University of Sindh, Laar Campus Badin. A closed-ended questionnaire was designed to gather quantitative data about the participants' spelling skills and their opinion about the mistakes made in spelling words in written composition. The questionnaire was distributed using Google Forms, which means that the participants were able to fill it out digitally. This was divided into two parts. The first part was on the spelling skills of the participants, and the second was on the spelling error related experience, perception and reflection of the participants. This bi-partite design was designed to give information on the spelling performance reported by both participants and on the awareness of the problem inherent in the spelling of English words.

Population and Sample

The data were collected from the students of University of Sindh. The study included 90 students who filled in the online questionnaire. The participants came from the first, second, third- and fourth-year undergraduate courses and were from different departments. Having students of varying academic years and departments allowed for looking at the spelling difficulties from a variety of undergraduate learning environments. The questionnaire emphasized spelling errors committed in the writing of English and

categorized the errors reported by the participants according to the types of errors they made and their attitudes towards the causes of the errors.

Data collection will be in the form of a tool and method. Data collection will be done using a tool and procedure. The main instrument used for data collection was a closed-ended questionnaire. The questionnaire was developed to get structured responses which can be quantified and analysed statistically. The questionnaire was created and sent out via Google Forms with the aim of acquiring the responses of the participants. The instrument consisted of two main parts, the first part was related to the spelling skills of the students, and the second part was to the extent of errors that students experienced and the perception of errors. The results on spelling ability and error frequency are based on the self-report of participants and, therefore, need to be interpreted with reference to the specific items and choice of response options on the instrument.

Theoretical Framework

Analysis of spelling errors was carried out on the basis of the classification of spelling errors in English as a foreign language as proposed by Cook (1999), which classifies spelling errors into four types: omissions, additions, substitutions and transpositions. These categories were used to detect and classify spelling mistakes based on the type of changes made to the standard word spellings.

Omission: A letter that is missing in a word that has to be in the word; for correct spelling.

Insertion: the inclusion of a letter that is not normally part of the spelling of a word.

Substitution: Replacing the required letter with a wrong letter.

Transposition: The pairing up or turning round of letters in words that is the wrong way around.

The classification helped the researchers to categorize the spelling mistakes found in the data into separate categories. It also gave a baseline for the assessment of the distribution of the various error types among participants. The use of Cook's classification did, however, rely on the type of misspelled word forms that the study presented to the participants; either actual misspelled word forms or participants' personal perception of having actually written the word incorrectly. The results have to be considered as evidence from the questionnaire and not as an exhaustive analysis of errors in natural writing.

The difference between errors and mistakes

The conceptual difference between errors and mistakes also helped to make sense of learners' spelling problems. Errors are the gaps in the learner's underlying linguistic knowledge, while mistakes occur when the learner simply doesn't use the knowledge that he has. (Corder 1981) Errors are therefore attributable to the learners' ongoing linguistic competence and mistakes are normally attributed to factors affecting performance, such as failure of attention or poor memory. Errors are often hard to self-correct, because they are evidence of incomplete or inaccurate knowledge, whereas mistakes can be identified and corrected by learners themselves, James (1998) further explained. This difference is also important in the context of spelling research because if the learner writes a word incorrectly, he or she does not necessarily not know the correct spelling. Some of the misspellings may be due to a confusion of spellings and others to lapses in reading or attention. However, the evidence of learners' awareness and self-correction is needed to differentiate between these possibilities. Therefore, only the questioner can use the questionnaire results to come to a determination whether a particular spelling error is an error or whether it is a mistake made during the test. The present study is further examined by another research conducted by Muhammad Akbar, Habibullah Pathan and Waqar Ali Shah (2018) in which they explored the problems of English writing among second

language learners in a public sector college in Hyderabad, Sindh, Pakistan. Through a quantitative method, they found that these types of expression and informal language were used in internet communication and text messaging frequently, and it affected students' spelling. The findings also revealed that sometimes students used romanized Urdu for English words when they were not sure of the English word spelling. Vocabulary was also shown to be a significant source of difficulty and there was found to be a close relationship between the difficulty of spelling and the child's knowledge of words. The study also emphasized the problems of L2 acquisition and interference of first language (Urdu and Sindhi) with English. The findings are useful in providing a contextual background for investigating spelling problems of the undergraduate students of Sindh. Specifically, they propose that the knowledge of English words that students have, their access to the informal digital communication, and the language differences between the students' first language and English, all influence their attainment of spelling. Unless they are included in the questionnaire or confirmed by the data collected, however, they are considered as contextual factors in the present study and not as causes of spelling errors committed by the participants of the study.

Data Analysis

Google Forms were used to collect quantitative data which was to be analysed by categorising the responses the participants gave according to the question numbers and the corresponding spelling-error categories. Frequencies and percentages were calculated where the questionnaire offered categorical or numerical responses to summarise the patterns of responses and identify the most common difficulties with spelling. If real misspellings were recorded, they could also be categorised based on Cook's (1999) four category system. Based on the assumption that distinguishable errors and mistakes can be used to draw conclusions about the spelling skills and perceptions of spelling errors of the participants, the methodological approach was structured in a quantitative manner. The study had two aims, one being the identification of major spelling problems that emerged within the chosen academic environment, the other, the identification of the spelling difficulties by using a closed-ended questionnaire and a classification system. The results might be helpful in providing a better understanding of students' spelling problems and a foundation for the creation of more targeted strategies for English writing development.

Table 1: Frequency of Errors According to Cook's OSIT

Type of Error	Frequency	Percentage (%)
Omission	42	38.18
Insertion	31	28.18
Substitution	22	20.00
Transposition	15	13.64
Total	110	100.00

The table shows the frequency and percent distribution of spelling errors by type following Cook's OSIT system. In the total 110 errors identified were of four types: omission, insertion, substitution and transposition. Omission errors (42 errors, 38.18%) were the most common type of errors. The second most common error was insertion with 31 errors (28.18%). The errors made were mostly substitution errors (22 errors, 20.00%) and the least common error type was transposition (15 errors, 13.64%).

The results suggest omission and insertion errors types were the most common types, representing 70 (63.64%) errors of all the types of spelling errors. This is a pattern, indicating that more letters were omitted and added in the analysed data. The frequencies, however, do not provide the underlying causes of these errors. Further analysis of misspelled words and learners' responses is needed to determine whether the patterns are related to phonological awareness, orthographic conventions, morphological structures, or other factors, but the results confirm that errors were made on all four of these patterns, to some extent. The omission and insertion errors are very common, which can be used as a starting point to explore the learners' errors in spelling and the aspects that need more focus in the English spelling process.

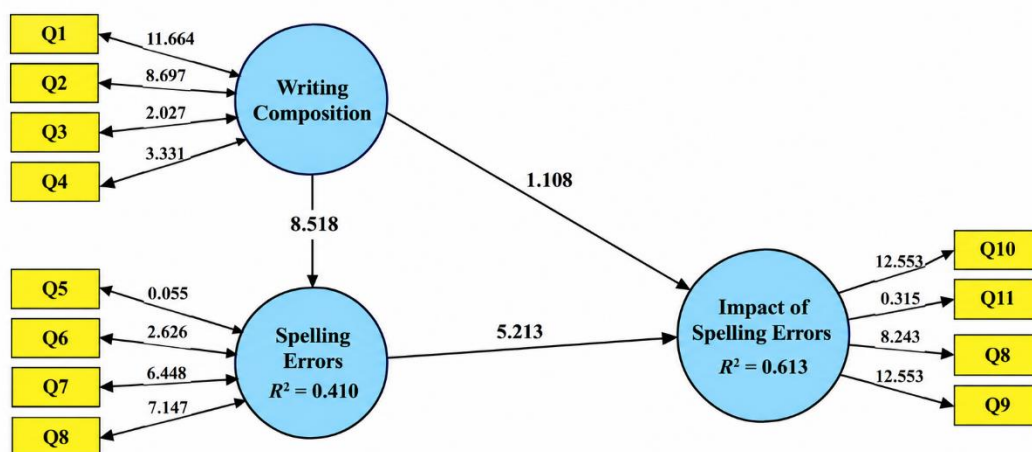


Figure 1. Structural Model of the Relationships among Writing Composition, Spelling Errors, and the Impact of Spelling Errors

Measurement Model

The Measurement model is used to investigate the relationships among constructs and indicators of the study. In terms of English writing ability, spelling, word knowledge, grammar, punctuation, and rhetoric are all connected. Previous studies on English writing problems of SLLs have shown the role of first language interference, limited vocabulary, inadequate knowledge of English spelling rules, and problems in applying grammatical rules. Some learners may use the Romanized Urdu or other familiar languages if they are not sure of the English spellings of the words, indicating that they might struggle to apply the standard spelling rules of the English language. Vocabulary knowledge is also highly correlated with spelling skills, since spelling demands knowledge of the pronunciation and definitions of written words. In addition, there can be differences between the two languages which can further pose problems in spelling and written expression. Grammar and punctuation are also an essential aspect of good writing. Learners' problems in using English grammatical structures may impact their capacity to form coherent sentences and correctly apply punctuation.

Punctuation mistakes can make the meanings unclear and hinder good communication in writing. An important facet of writing proficiency is rhetorical competence, which involves arranging ideas in a logical order, providing coherence, and relating events in a suitable way. Students with difficulties with grammatical structures may also have trouble organizing and expressing their ideas effectively. The interconnections among these relationships underscore the need to investigate spelling problems in the context of the development of English written language.

Structural Model Analysis

The relationships between spelling errors, writing composition and the effect of spelling errors were explored using the structural model. The results showed that the relationship between spelling errors and the consequence of errors was positive, having an original sample coefficient of 0.68, a sample mean coefficient of 0.67, a standard deviation coefficient of 0.14, a t-statistic of 4.73, and a reported p-value of 0.00. The t-statistic is larger than the commonly used value of 1.96 and the reported p-value is less than 0.05, thus the relationship is statistically significant at 5% level. The finding is that the spelling error is strongly related to their reported effect in the proposed model. The original sample coefficient of the relationship between writing composition and the effect of spelling errors was 0.15, and its sample mean was 0.18, with a sample standard deviation of 0.14, t-statistic of 1.11 and p-value of 0.27. The t-statistic is less than 1.96 and the p-value is greater than 0.05, which means that this relationship is not statistically significant at the 5% level. Thus the results do not warrant a direct conclusion that writing composition is linked to the effect of the spelling errors in the specified model.

The coefficient of the original sample was 0.64, the sample mean was 0.67, the sample standard deviation was 0.08, the t-statistic was 8.21, and the reported p value was 0.00. The relationship is statistically significant at 5% level, suggesting a positive association in terms of the model, between writing composition and spelling errors. But the substantive understanding of this relation can be affected by the way the constructs were defined and coded. In other words, the positive coefficient does not necessarily mean that writing composition has a positive effect on spelling, because the direction of the score depends on the scale for the spelling task and the direction of the score for the writing task.

The results underline the need to provide spelling instruction that is systematic and context-based to address spelling problems. Spelling instruction can be supported by teachers by inserting it into the learning of pronunciation, vocabulary development and the explicit teaching of English orthographic conventions. Spelling exercises, dictation, word-pattern analysis and corrective feedback may give opportunities for the learners to recognise and correct frequent errors. Highlight the discrepancies between the sounds and the letters in words, since sometimes a student can't deduce the spelling of a word from its sound. In addition, first language interference should be targeted in teaching spelling and the conventions of English spelling needs to be contrasted with the conventions of the learner's first language. Pupils should also learn in a learning environment that is conducive to them practising spelling without the fear of being embarrassed or making mistakes. Identification of spelling problems early coupled with specific teaching and repeated practice could allow for students to become more accurate and confident in written communication. These recommendations should be deemed pedagogical implications of the study with no causal conclusions drawn through application of the structural model.

Conclusion

The results showed that the students made many types of spelling errors, and omission errors were one of them. The most common misspelled words in this class were environment, halves, and stopped. Errors indicate that students had difficulty with certain letters and letter combinations; this was especially true when the spelling rules were not readily discernible phonetically. For instance, the mis-spelling of the word environment and halves could be a result of having trouble recognising and remembering the correct order of letters. The omitted letters should be checked against the students' answers, however. Errors and mistakes in second-language learning are also to be differentiated. The term 'mistakes' is generally related to performance and can be corrected by the learner when he or she is aware of it (Corder, 1981 in Al-Jayousi, 2011). Errors, on the other hand, represent errors in the learner's L2 system and can remain due to the lack of the language learner's ability to discover and correct them alone. This difference has to be taken into account if we are to have any understanding of student's spelling problems and to choose the right strategies to teach them. Hence, teachers should pinpoint the frequently used spelling patterns, explicitly teach the spelling rules of the English language, and conduct regular spelling training and correct spelling mistakes in a suitable way to enable pupils to identify and fix errors that occur repeatedly.

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