SYNTACTIC CHALLENGES IN WH-QUESTION FORMATION: AN ANALYSIS OF ERRORS AMONG URDU-SPEAKING ESL LEARNERS OF PAKISTAN

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Abstract

The study of second language acquisition (SLA) is a key area of applied linguistics that examines how languages are learned, acquired, as well as their similarities and differences. This study investigates the syntactic challenges faced by Urdu-speaking learners of English as a Second Language (ESL) in forming WH-questions. Grounded in the Principles and Parameters framework of Generative Grammar, the research examines how typological differences between English (a WH-fronting language) and Urdu (a WH-in-situ language) contribute to persistent learner errors. Using a mixed-method approach, the studycollecteddatafrom 40 Matric-level femalestudents at a government school in Lahore through elicitation tasks conducted before and after a 30 -hour instructional intervention. Quantitative analysis, supported by SPSS, and qualitative interpretation reveals that errors primarily stem from first language transfer, incomplete acquisition of Universal Grammar constraints, cognitive overload in complex syntactic structures, and limited exposure to native-like input. The findings of the post-test indicate improvement in meaningful placement of auxiliary and syntactic awareness reinforcing the positive effect of explicit instruction. The results emphasize the necessity of contrastive method instructional techniques and increased target language exposure syntactically informed ESL curriculum. The study adds in SLA theory and provides concrete suggestions on how to enhance the teaching of WH-questions in Pakistan classrooms.

Key Words*: Wh-words, WH-scrambling, WH-fronting, acquisition, error analysis, English, in-situ language, specifier*

Introduction

The creation of WH-questions is a complicated domain of English syntax that challenges, present major obstacles to second language learners especially those whose first language L1 is different in its syntactic rules. In situations such as Pakistani ESL, where the dominant language is Urdu, L1, learners tend to face consistent challenges of properly forming WH-questions in English. Such mistakes may include confused auxiliaries and disorders of words. omission or misuse of WH-elements. These tendencies indicate underlying problems based in both cognitive processing and linguistic transfer. The identification of errors is vital in enhancing pedagogical approaches and creation of effective instructional materials. The paper is, thus, aimed at examining what kind of linguistic errors are often committed by Pakistani ESL learners when constructing English WH-questions and at discussing the reasons of such errors in the context of second language acquisition and syntactic theory.

Second Language Acquisition and Theoretical Framework

Second Language Acquisition (SLA) is an area of study with the aim of comprehending how individuals acquire proficiency in a language other than the native one. According to Khudadad, Pervaiz and Khatoon (2022), second language is the intended destination for speakers of other languages. According to Gass (2013), SLA examines how a new linguistic system is acquired by way of mental and linguistic processes. Any language after the first language (L1) is in this context discussed as a second language (L2), whether it be only one or many others. One of the main objectives of SLA research is to study how learners learn an L2

and what contributes or inhibits the language learning process. According to Mitchell and Myles (1998), there are two large theoretical orientations in SLA, namely the generative perspective, which is based on the Universal Grammar (UG) and the cognitive perspective, which is concerned with general learning processes that is implicated in language development. Generative approach claims that language competence is promoted and sustained by an inbuilt grammatical structure referred to as Universal Grammar (UG). Such system includes general syntactic principles that are common to all human languages, and parameters, which explain cross-linguistic variation (Kim & Sells, 2008). The UG theory indicates that principles do not change among languages, but parameters do and define how certain syntactic structures will look in a particular language (Miller, 2016). This paper takes up the Principles and Parameters approach to the study of Wh-movement acquisition in Urdu-speaking ESL students, and offers a generative perspective with reference to which syntactic development can be discussed.

Wh-Movement in English and Urdu

According to Haroon, Aslam & Saleem (2023), WH-in-Situ languages are dichotomous concerning Wh-movement parameters. English language, which is a subject-verb-object (SVO) language, necessitates that WH-elements are overtly moved to the forefront of the clause, i.e., within the domain of the complementizer phrase (CP). A number of grammatical principles regulate this syntactic process, also called Wh-movement:

- **Subjacency Principle**: Movement of WH-elements should not traverse more than a single bounding node at a time. An example is that, *who did Ali think Usman saw?* is an application of this principle, whereas *who did Sarah believe that Ali hit?* fails it, because two bounding nodes are crossed.
- **Extended Projection Principle (EPP)**: Each clause should have a clear subject just like in *Saleem kicked the ball* whereby Saleem fits the subject requirement.
- **Empty Category Principle (ECP)**: It asserts that the trace of a moved Wh-element should be syntactically visible and well-governed. When the trace cannot be recovered (e.g., because it crosses some restriction), the sentence is ungrammatical. For example, *what did Sara buy?* is correct while *What do you wonder whether Sara bought?* Ungrammatical.
- **WH-Fronting**: In English, there is a requirement that the WH-elements should be at the front of the interrogative phrase, like *Who is running fast?*
- **Long-Distance Wh-Movement**: English permits WH-elements to move across multiple embedded clauses, e.g., *Whom does Ayesha believe that Sarah knows that Zara likes?*
- **Pied-Piping**: When a WH-element is part of a phrase, the entire phrase must be fronted, as in *How loud is the song?*
- **WH-Expletives**: In certain contexts, dummy WH-elements can be used, as in *I don't know whom it is appropriate to invite.*

In contrast, Urdu, which follows a subject-object-verb (SOV) structure, is classified as a WH-in-situ language. This means WH-elements remain in their original syntactic positions and do not move to the clause-initial position, leading to significant structural differences from English:

- **No Subjacency Constraint**: WH-elements in Urdu can cross multiple nodes without violating grammatical constraints.
- **No Empty Category Principle**: The trace left by a moved element does not need to be overtly recoverable.
- **No Extended Projection Principle**: Urdu clauses can lack overt subjects without violating grammaticality.

- **WH-Scrambling Instead of WH-Fronting**: Urdu permits flexible word orders in WH-questions. For example:
  - *Kya tum khana kha rahay ho?* (Are you eating food?)
  - *Tum kya khana kha rahay ho?* (What food are you eating?)
  - *Khana kha rahay ho tum kya?* (Are you eating what food?)

Research significance

Understanding the types of linguistic errors Pakistani ESL learners make in forming WH-questions, along with the underlying causes of these errors, holds significant pedagogical and theoretical value. Given the syntactic divergence between English, which requires overt Wh-movement, and Urdu, which generally follows a WH-in-situ structure, Pakistani learners often struggle with accurate question formation. Detecting these recurrent mistakes and their origins whether it be as a result of first language transfer or lack of adequate knowledge of syntactic rules or insufficient exposure can be of great help in the interlanguage development of learners. The findings are essential to language teachers, curriculum designers, and assessment designers because it provides a direction when designing instructional materials and remedial interventions that are specific to certain syntactic difficulties. Additionally, the study is beneficial to the entire domain of second language acquisition as it provides empirical data regarding the role of cross-linguistic syntactic variation in the learning of difficult grammatical constructions such as WH-questions.

Research objectives

- To examine the extent and nature of native language (Urdu) interference in the syntactic errors made by Pakistani ESL learners during the formation of English WH-questions.
- To identify and categorize the common linguistic errors made by Pakistani ESL learners in the formation of English WH-questions.
- To investigate the underlying linguistic, cognitive, and cross-linguistic factors that contribute to these errors in WH-question formation.

Research Questions

- What role does interference from native languages play in the errors Pakistani ESL learners make in forming WH-questions?
- What types of linguistic errors do Pakistani ESL learners commonly make when forming WH-questions in English?
- What are the underlying causes of these errors in WH-question formation among Pakistani ESL learners?

Rationale of the Study

The ability to form WH-questions is a fundamental aspect of communicative competence in English, essential for asking questions, seeking information, and engaging in interactive discourse. However, for Pakistani ESL learners whose first language, Urdu, follows significantly different syntactic rules mastering WH-question structures presents persistent challenges. These challenges often manifest in systematic linguistic errors, which can hinder learners' overall proficiency and confidence in using English for academic and everyday communication. the second language is the target for the native speakers of other languages to learn it.

Despite the critical role of question formation in language use, limited empirical research in the Pakistani context has specifically addressed the types and causes of errors in WH-question construction among ESL learners. Given the syntactic contrast between English (a WH-fronting language) and Urdu (a WH-in-situ language), a deeper exploration into these errors is both timely and necessary. This study seeks to fill this gap by identifying and categorizing the

most frequent WH-question errors made by Pakistani learners and examining the linguistic, cognitive, and cross-linguistic factors that underlie them.

By adopting a generative framework, particularly the Principles and Parameters theory, this research provides a theoretically grounded analysis of learners' interlanguage development. The findings aim to inform more effective teaching strategies, contribute to curriculum development, and enhance language assessment tools ultimately improving instructional practices for English language learners in Pakistan. Additionally, the study offers broader implications for second language acquisition research by shedding light on how first language structures influence the acquisition of complex syntactic features in a second language.

Literature Review

Language acquisition has been a major focus in linguistic field, more specifically the process of internalizing and producing linguistic structures. According to Hornby (2010), acquisition is the mental process in which people learn and acquire knowledge as well as skills whereas language acquisition is that which refers to the mental faculties that make human beings to understand and to learn linguistic systems (Chomsky, 1957). Chomsky holds that as long as appropriate environmental input is present, language acquisition is a cognitive process that depends on inborn principles. In this respect, second language acquisition (SLA) is concerned with the way in which non-native speakers learn a second language other than their native one.

Universal Grammar and the Principles and Parameters Framework

The theory of Universal Grammar (Universal Grammar or UG) by Chomsky (1965, 1972) offers the idea that all human beings are born with a universal set of grammatical rules that are shared across all languages. This is also further developed in the Principles and Parameters (P&P) framework (Chomsky, 1981, 1986), also referred to as Government and Binding Theory, which states that the UG contains both universal principles and parameters, which explain cross-linguistic differences. This framework states that principles are unchangeable constraints that are used universally, but parameters permit syntactic variation in languages. The example of Pro-Drop Parameter is why in some languages, such as Spanish, and not in English, one may omit the subject pronoun.

This theoretical framework has made a huge contribution in the field of syntactic theory and language acquisition because it provides a systematic approach to study common features and variation among languages. In SLA, several hypotheses have been proposed to explain how L2 learners acquire new parameter settings. The Full Transfer/Full Access Hypothesis (Slabakova, 2000) posits that learners initially transfer L1 parameter settings to their interlanguage but eventually restructure their grammar based on L2 input. However, other studies, such as Yuan (2001), suggest that learners can acquire some syntactic features of the L2 early in the learning process, independent of their L1 background.

Wh-Movement in English and Urdu

Wh-movement is a central syntactic phenomenon within the generative grammar tradition. Chomsky (1982) characterizes it as the displacement of a WH-phrase from its original syntactic position to the front of the clause. Cook and Newson (2014) describe this movement as a shift of an interrogative element from its argument position into the Complementizer Phrase (CP) domain. WH-elements (e.g., *what*, *who*, *where*, *why*) are base-generated in canonical positions and undergo movement to form interrogative structures (Chang, 1997).

Consider the following examples:

1. *Alaya has been reading Dicken.*
   → *Whom has Alaya been reading?*
   In this case, *whom* replaces the direct object *Dicken* and is moved to the front.
2. *Usman is reading Jack's novel.*
   → *Whose novel is Usman reading?*

This illustrates *pied-piping*, where the entire noun phrase is fronted along with the Wh-word.

3. *Whom does Bob like _____?*
4. *Who does Call know that Mary likes _____?*
   These examples demonstrate that WH-elements can move across clauses and cover long syntactic distances from their original positions without restriction.
5. *She is doing well.*
   → *How is she doing?*

Cross-linguistic studies have revealed significant variation in how Wh-movement is realized. Horrocks and Stavrou (1987) distinguish between languages that allow long-distance Wh-movement and those that do not. In WH-in-situ languages like Chinese, Japanese, and Urdu, WH-elements typically remain in their base-generated positions, and any movement occurs covertly at the level of Logical Form (LF) (Simpson & Bhattacharya, 2003; Toosarvandani, 2008). Manetta (2010) adds that although Urdu follows a WH-in-situ pattern at the surface level, syntactic movement does occur at a deeper abstract level, consistent with principles of Government and Binding Theory.

In English, Wh-movement is overt and obligatory for forming interrogatives (Dayal, 2017). In contrast, Urdu generally maintains WH-elements in situ and allows for flexible word orders due to its scrambling mechanism. Manetta (2010) emphasizes that Urdu Wh-movement is pragmatically driven and occurs within the syntactic structure without manifesting at the surface level. This distinction highlights the structural differences between the two languages in question formation.

Error Analysis

Error analysis, a fundamental approach within second language acquisition (SLA), has long served as a diagnostic tool for understanding the linguistic competence and developmental patterns of language learners. Introduced systematically by Corder (1967), error analysis emphasizes the significance of learner errors as evidence of interlanguage development rather than mere deficiencies. In contrast to contrastive analysis, whereby most of the error is attributed to first language (L1) interference, error analysis allows a more refined study of errors caused due to different sources such as developmental sequences, overgeneralization, incomplete rule application, and cross-linguistic influence. Other scholars like Dulay, Burt and Krashen (1981) divided errors into interlingual and those that are intralingual showing that not every error is caused by L1 transfer and could be a result of universal learning approaches. Within the syntactic constructs such as WH-questions, error analysis has been specifically revealing in extracting the learner's trouble in the use of auxiliary inversion, WH-fronting as well as the do-support status which are erroneously applied by learners whose native language does not front WH. This method of analysis gives us a systematic way to categorize and follow the origin of errors that learners make and, in effect, it gives us pedagogical considerations in how to specifically address errors and tailor curriculum to them. Error analysis, as used in the current study, aims not only to quantify and categorize the various types of syntactic errors committed by the Urdu speakers of the English as a second language (ESL) in this context but also to explain the errors through the theoretical perspective of interlanguage and Universal Grammar.

Previous Research on Wh-Movement

Wh-movement and its cross-linguistic variation have been studied in many ways. Using a Phase-Based Approach, Bayer (2015) considered a covert Wh-movement, quantifier raising, and pied-piping in WH-in-situ languages. This work highlighted both the syntactic similarities and differences of languages that have overt or covert Wh-movement.

Mowarin and Oduaran (2014) examined Wh-movement, pied-piping and other restrictions in English and some of the Nigerian languages and concentrated on the cognitive challenges L2 learners encounter in the learning of these constructions. Their research highlighted the influence of typological differences in forming interrogatives. Malhotra (2009) studied intervention effects in Wh-movement and noted that these syntactic phenomena remain a subject of debate in both theoretical syntax and semantics.

Al-Touny (2011) utilized the Minimalist Program to compare interrogative structures in Cairene Arabic and English, emphasizing constraint hierarchies and typological variation. Similarly, Abu-Jarad (2008) examined Wh-movement in Palestinian Arabic and found distinctions in how WH-arguments and WH-adjuncts function within the language. Cheng (1997, 2000) supported the view that WH-adjuncts undergo overt movement, while WH-arguments may remain in situ, a claim corroborated by empirical data.

These studies collectively underscore the complexity and variability of Wh-movement across languages, particularly in the context of L2 acquisition. Given the syntactic divergence between English (an overt Wh-movement language) and Urdu (a WH-in-situ language), the current study aims to investigate how Urdu-speaking learners of English acquire WH-question structures. Specifically, it focuses on WH-fronting, scrambling, and the role of parametric variation, seeking to uncover the acquisition patterns and syntactic challenges encountered by Pakistani ESL learners.

Research Methodology

This section outlines the study's population and sample, along with the sampling technique employed. It also details the key research variables and the tools used for data collection. Furthermore, ethical considerations relevant to the study have been addressed. The researcher has given detailed overview of data analysis procedures such as the data presentation methods and type of software that is used to streamline data analysis.

Research Strategy

The research design used in this study is a mix method research approach, which aims at investigating the linguistic issues of Pakistani ESL learners in the area of constructing English WH-questions. The study is anchored on the Principals and Parameters theory of the Generative Grammar theory that enables an orderly study of syntactic patterns and variations. The plan will allow conducting a thorough study of both the nature of errors committed and the possible effect of the native Urdu language on the acquisition of the second one.

There is a comparative linguistic study of the WH-question structures of English and Urdu to determine the main areas of syntactic convergence and divergence. This theoretical comparison is used as the basis of interpretation of the kind of mistakes identified in learner data. The study administered a mixed-method research design and used elicitation tasks with a sample size of 40 Matric-level female students in a government school in Lahore before and after a 30-hour instructional intervention.

The gathered feedback is processed with the help of the SPSS and the data is represented in the form of the tables and graphs. The patterns of deviation are analyzed using the concepts of interlanguage theory and cross-linguistic influence which provide answers on how the L1 grammatical structure of the learners might be influencing their L2 product.

The research strategy has not just described the pattern of errors but also identified the cognitive as well as structural constraints that influence the development of the interlanguage of learners and eventually lead to better English language instructional practices by Urdu-speaking learners.

Research Design

The proposed research work has a qualitative research design and is highly appropriate to investigate the depth of syntax acquisition and the character of syntactic mistakes produced by

ESL learners. The design enables subtle and interpretive examination of learner language by relying on Universal Grammar and Principles and Parameters approach. Through the qualitative method, the researcher is able to initiate trends in the type of errors that occurred in the construction of Wh-questions and explain these trends by referring to theoretical frameworks, including interlanguage development and first language interference, Urdu, of the learners.

Research Tool

The primary research tool used in this study is an elicitation task designed to generate learner data on WH-question formation. Participants were provided with 10 declarative sentences, each containing an underlined word or phrase, and were asked to transform these into corresponding WH-questions. This task is structured to prompt spontaneous syntactic processing, allowing the researcher to observe how learners construct questions based on their current grammatical knowledge. The elicited responses served as the core data for qualitative analysis, facilitating the identification and categorization of linguistic errors in line with the study's theoretical framework.

Research Population

The research population refers to the entire group from which a sample is drawn for the purpose of a study. In this research, participants were selected using a random sampling technique. The sample consists of 40 female ESL learners at the secondary level, chosen from a randomly selected government secondary school located in Lahore, Pakistan. This population was selected to ensure that the study captures the linguistic behavior of typical Pakistani ESL learners within the public education system.

Variables

In this study, age and linguistic background are controlled variables, kept constant to maintain focus on the acquisition of English WH-questions. These factors were considered essential as both are known to significantly influence second language acquisition. The participants, all sharing a similar linguistic background (Urdu as their first language), were within the age range of fifteen to seventeen years, a stage often associated with active language development.

Ethical considerations

This study was conducted in accordance with standard ethical research practices. Informed consent was obtained from all participants prior to their involvement, ensuring that their participation was entirely voluntary. Additionally, participants were assured that all data collected would be used solely for academic and research purposes, and their privacy and confidentiality were maintained throughout the study.

Analysis and Discussion

Analysis of Pre Test Elicitation Task

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
John called the police.	40	1	2	1.20	0.40
I will see you tomorrow.	40	1	2	1.87	0.33
Marry did not like the film he saw with John.	40	1	2	1.85	0.36
I hope that John will help me.	40	1	2	1.97	0.15
I put it in the dustbin.	40	1	2	1.82	0.38
Marry thinks that John will leave the job.	40	1	2	1.95	0.22

He did the assignment carelessly.	40	1	2	1.90	0.30
He was taking a picture of Marry.	40	1	2	1.97	0.15
Pakistani team could not qualify to the World Cup final because of its poor performance.	40	1	2	1.95	0.22
Osama has been killed in severe bombardment by American Special Forces in Abettabad.	40	1	2	1.87	0.33
Valid N (listwise)	40				

The results of the elicitation task run on 40 participants, who were asked to interpret or complete a number of sentences, are presented as the descriptive table of statistics. The figures show min and max value and mean and standard deviation values that allow us to understand the participants' consistency and variability in responding to these prompts elicited.

There is a great variation in the mean scores across sentences, running from 1.20 to 1.97, which suggest that the sentence structures are not equally easy or not equally difficult for participants to process and respond to. The mean score with the lowest value (1.20) is found for the sentence "John called the police," implying that this sentence was the easiest for participants to elicit an expected response. On the other hand, the mean scores (1.97) for sentences like 'I hope that John will help me', 'He was taking a picture of Marry' show that the participants gave mostly the expected response with lowest SD values.

In all cases, the standard deviation values are low, within the range of 0.15 and 0.40, indicating that participants had a high degree of agreement in their elicited responses. However, the slightly higher standard deviations of 0.40 for "John called the police" and 0.38 for "I put it in the dustbin" imply that some of the participants might have produced alternative interpretations (or responses) that could be slightly different from the expected norm. Despite these differences, they are minor and overall consistency is the order of the day.

For sentences with embedded clause or additional contextual information, such as "The Pakistani team could not make it to the World Cup final due to its poor performance", mean scores are also high (1.95), suggesting ease of participants to process and do away with these structures. What this means is that they were able to infer or predict what would be the appropriate responses after the given prompts.

Lastly, the general outcome reveals that the participants demonstrated a high level of ability to carry out the elicitation task with minimal variation of responses. The small standard deviations and larger mean scores provide evidence of proper comprehension of sentence structures and what is expected in the completions resulting to high reliability of the elicitation task. One could compare the results with pre-test scores or see whether some sentence types (e.g., declaratives vs. embedded clauses) affected response patterns. We may undertake inferential statistical tests such as paired t-tests or mixed effects modelling to track along with each participants elicited response in more detail.

Post Test Analysis

The descriptive statistics of data collected by the post-test elicitation task provide beneficial information regarding the syntactic progress of Pakistani ESL learners following a duration of specific training. The elicitation task involved 40 female learners who were working at the Matric level and instructed to change declarative sentences into WH-questions and the

responses of these learners were evaluated on a binary measure in which 1 signified incorrect transformation and 2 represented a correct transformation. This post-test was administered after a well-designed pedagogical intervention on English WH-question structure, and the information can be used to evaluate the success of the pedagogical input per se and the syntactic competence acquired by the learners.

The mean scores for individual sentence items range from 1.00 to 1.82, suggesting a moderate to high level of improvement in students' ability to form WH-questions after instruction. A significant number of items showed mean values above 1.60, reflecting that most students were able to apply the rules of WH-question formation with a fair degree of accuracy. This is a clear indication that explicit instruction played a positive role in helping learners internalize English syntactic patterns, especially those involving subject-auxiliary inversion and WH-fronting.

Despite the general improvement, variation in the standard deviations (ranging from 0.00 to 0.50) suggests that not all learners benefited equally from the intervention. The higher standard deviation scores indicate variability in learner performance, revealing that while some students grasped the grammatical structures successfully, others continued to struggle. This inconsistency may stem from individual differences in cognitive processing, prior exposure to English, or varying degrees of L1 interference. For example, students with stronger reliance on Urdu syntactic structures may have found it difficult to override L1 transfer, particularly in complex syntactic constructions like embedded clauses, passives, or idiomatic expressions.

A significant finding is one having a mean score of 1.0 and a standard deviation of 0.0, which reflected a completely wrong answer on everyone in the sample. This indicates that some sentence types were still completely inaccessible at the post instruction period perhaps because of the syntactic complexity or lack of similar constructions in Urdu. This finding indicates that, although instruction was successful in building general competence, it is possible that some structures need longer, scaffolded exposure or different pedagogic approaches to be acquired successfully.

In addition, the items that have more mean scores near 1.75 or higher have a high rate of syntactic awareness and emerging grammatical restructuring which is a major notion in interlanguage theory. It is clear that learners are moving towards more target-like grammatical constructs as opposed to dependence on L1 syntactic patterns despite performance not being exactly native in nature. This lends credence to the Full Transfer/Full Access Hypothesis (Schwartz & Sprouse, 1996) that holds that learners initiate with the L1 structures but then restructure their grammar over time by relying on L2 input and the background constraints.

To conclude, the descriptive post-test statistics demonstrate that with the help of focused grammatical instruction, which correlates with the syntactic issues of learners, performance in a particular structure such as English WH-questions can be greatly enhanced. Nonetheless, the consistent nature of the fluctuations and consistent inaccuracy of some items is important in highlighting the need of continued and differentiated instruction, especially in those areas where there is a significant divergence between L1 and L2. These results point to potential implications on the design of ESL curriculum in Pakistan where a more balanced teaching strategy between explicit grammar instruction and communicative, input-rich tasks that gradually reinforce more complex syntactic forms in the long run is recommended.

Discussion

Many linguistic and cognitive reasons were cited as accounting for the mistakes made in the pre-test data, such as first language (L1) transfer, incomplete acquisition of Universal Grammar (UG) constraints, lack of exposure to native-like input, and the natural complexity of the English WH-questions. The section discusses these factors and why Urdu-speaking ESL learners had trouble with WH-question construction and how they changed in the post-test phase.

One of the most evident error sources was L1 transfer. There were a lot of instances that learners transferred Urdu syntax to English WH-questions. As a WH-in-situ language, Urdu does not need WH-fronting or auxiliary inversion and that contributed to the tendency of WH-learners to keep WH-elements in situ in the effort to form the English questions. Such intrusion was demonstrated in pre-test answers like *what you liked?* instead of *what did you like?* and *where you are going?* as opposed to *Where are you going?* These examples illustrate the heavy load of L1 syntax in early L2 learning as well as it demonstrates the challenge that learners have in getting internalization of the syntactic demand of English.

Another significant source of error involved the misuse of auxiliary verbs, particularly the incorrect application of do-support. Many learners demonstrated confusion in subject-auxiliary inversion, resulting in errors such as *"Who did call you?"* instead of *"Who called you?"* and *"Why you did go there?"* rather than *"Why did you go there?"*. These errors reflect a gap in learners' syntactic awareness, specifically in mastering the auxiliary insertion rules that govern English WH-question formation.

Incomplete parameter resetting within UG also emerged as a critical issue. Several learners failed to recognize violations of syntactic constraints such as subjacency and island conditions, producing sentences like *"What do you wonder where she went?"* and *"Who do you think that he will help him?"*. These errors indicate a lack of understanding of long-distance Wh-movement constraints, which are deeply embedded in UG. As previous research (e.g., White, 2003) has shown, the resetting of such parameters often requires explicit instruction and sustained exposure to the target language.

In addition, learners exhibited cognitive difficulties in processing syntactically complex structures, particularly in sentences involving embedded clauses. Errors such as *"Who do you believe who to help you?"* and *"What did you think what John had already bought?"* suggest a struggle with maintaining multiple syntactic dependencies an area that imposes high cognitive demands on L2 learners.

Another contributing factor was the limited exposure to native-like input. Most Urdu-speaking ESL learners in Pakistan acquire English in formal classroom settings, with minimal opportunities for naturalistic interaction. As a result, their reliance on explicit grammatical rules often leads to overgeneralization and rigid application of incorrect syntactic patterns, further complicating their WH-question formation.

The post-test results, however, demonstrated notable improvement. Learners showed better mastery in auxiliary placement, a reduction in WH-in-situ errors, and improved recognition of UG constraints. These findings suggest that explicit instruction plays a vital role in helping learners overcome many of the initial error sources. Nonetheless, challenges related to complex Wh-movement and subjacency violations persisted, indicating that some aspects of syntactic acquisition require further reinforcement and extended exposure.

Overall, these findings underscore the importance of targeted ESL instruction that addresses specific L1-L2 syntactic contrasts, provides direct teaching of UG-related constraints, and increases learners' access to authentic language input. Such approaches can significantly enhance Urdu-speaking learners' proficiency in forming English WH-questions.

The results confirm that L1 transfer significantly shapes early stages of L2 learning, but also affirm that structured, explicit instruction can help learners acquire complex syntactic features. Future research may explore the long-term effects of instruction, as well as how factors like age and proficiency level influence acquisition patterns. Additionally, the study lays the groundwork for further investigation into pedagogical interventions tailored to address language-specific syntactic challenges in ESL classrooms.

The errors made by Pakistani ESL learners in WH-question formation stem from a range of linguistic and cognitive factors that influence their second language development. One of the

most prominent causes is the transfer of syntactic structures from their first language, Urdu. As a WH-in-situ language, Urdu does not require the fronting of WH-elements or auxiliary inversion, which are mandatory in English WH-question formation. Consequently, learners tend to retain WH-elements in their base positions, mirroring Urdu sentence structures. This results in errors such as "What you liked?" instead of "What did you like?" and "Where you are going?" instead of "Where are you going?". These instances clearly reflect the impact of L1 interference, particularly at the early stages of L2 acquisition, where learners rely heavily on familiar syntactic patterns from their native language.

Error is also significantly caused by the fact that constraints of Universal Grammar (UG) are not fully acquired, particularly those on Wh-movement. The sentences of many learners in the study violated a subjacency and islands constraints like the following: What do you wonder where she went? or Who do you think that he will help him? Such mistakes are indicative of the learners failing to re-set parameters necessary to correctly move Wh-moved over long distance in English. This inability to diversify the L1-based grammatical intuitions means that they are unable to identify and use UG constraints that constrain complex syntactic arrangements, in the target language.

Besides syntactic transfer and UG-related problems, the cognitive processing failures also play a role in the problem of the learners. Building WH-questions based on compound sentences that have embedded clauses or more than two syntactic dependencies is a considerable cognitive load. Mistakes such as Who do you think who to help you? and What did you think what John had already bought? point to the fact that learners have difficulties coping with multiple layers of clause structure at once. Such errors would usually be the result of developmental phases in interlanguage where the learners have yet to automatise the hierarchical dependency between English clauses.

The improper use of the auxiliary verbs also becomes a problem when it comes to forming WH-questions. The auxiliary verbs are often omitted or misused in situations where they are needed do-support and subject-auxiliary inversion. Basing on examples like: Who did call you? instead of who called you? or why you did go there? instead of Why did you go there? indicates that the rules of auxiliary verbs in the English language have not been well understood. The origin of this challenge is probably the lack of similar syntactic element in Urdu, so learners find it difficult to acquire and recall these structures sufficiently and in consistent manner without decent amount of dedicated learning.

In addition, the contribution of minimal exposure to the native-like input cannot be disregarded. Students in this experiment were introduced to English mostly through classrooms or in a formal learning environment with little experience of using language in naturalistic conditions. This meant that they tended to acquire WH-question structures in a rule and formulaic manner and not with the naturalness and fluidity one gets as a result of using language as a means of communication. Such a limited learning context results in excess generalization of rules, inflexible use of pattern as taught, and a relative lack of development of grammatical intuition. Nonetheless, the post-test performance revealed that the learners were able to show a significant improvement which means that the explicit instruction was favourable to their comprehension and production of WH-questions. A high number of the students showed more appropriate placement of auxiliaries, fewer WH-in-situ incorrect forms and more awareness of grammatical accuracy. But others more deeply-rooted, particularly the faults of lengthy movement and subjacency violations, indicate that English syntax still has a few features that will not yield to brief training, and still demand reinforcement by more prolonged exposure and practice.

The findings point to the necessity of pedagogical strategies that would accommodate the unique issues of Urdu-speaking ESL students. The educator will need to be aware of syntactic

differences between Urdu and English and be clear and explicit in grammar teaching and plan activities in such a way that they foster both structural correctness and communicative competence. Further exposure to native-like input, via listening or reading material, or fluent speakers, can also help to facilitate acquisition of the intricate rules underpinning the formation of WH-questions. Addressing these fundamental areas of concern, ESL training will be able to better assist students in the pursuit of syntactic precision and linguistic assurance in their English usage.

The interference of the native language Urdu comes out as the most eminent factor in the syntactic variations that are specific in the WH-question development on Pakistani ESL learners. Being a WH-in-situ, subject-object-verb (SOV) language, Urdu allows a syntactic structure in which interrogative expressions are generally kept in their base-generated location, and that does not require explicit movement or subject-auxiliary inversion. This is quite different in English, an SVO language where there are mand atory WH fronting and auxiliary inversion in interrogative sentences.

As a result, the learners develop a habit of transposing L1 syntactic forms to the L2 production. This negative transfer has been evidenced in their incorrect structures like, what you liked? or where you are going? These patterns have been copying the syntax of Urdu instead of fitting the structural needs of English (e.g., What did you like or where are you going). These errors are not random but systematic in nature meaning that the learners are relying on L1 parameter settings in the early phases of interlanguage development.

The data also indicate that such interference does not just affect the surface, but that it is entrenched into the interlanguage grammar of the learners, so as to interfere with their capacity to properly reset syntactic parameters to that which obeys constraints of the English Universal Grammar (UG). In addition, the inappropriate use or failure to use auxiliary verbs especially where they are essential such as in do- support contexts highlight lack of respective syntactic feature in Urdu thus increasing the challenge of having to learn the same in English.

Although post-instructional testing shows visible progress in the syntactic accuracy of learners at least on simpler constructions the persistence of L1-related errors is an indication of the entrenchment of the native language influence namely on more complex structures that involve long-distance Wh-movement. Thus, the work supports the position that L1 interference is the primary and long-lasting factor in forming the error pattern of Pakistani ESL learners and has to be addressed critically with special reference to pedagogical intervention and contrastive syntactic instruction.

Conclusion

Conclusively, this paper has been able to give a detailed analysis of the nature and reasons of linguistic errors committed by Pakistani ESL learners when constructing English WH-questions. The post-test data were analysed, and it was found out that although after specific instruction, learners improved, there was still a variety of persistent errors, which could be considered a deeper challenge of the cognitive and linguistic nature. Most prominently, L1 transfer developed into a major source of error, the learners tending to transfer a set of Urdu syntactic patterns, including the WH-in-situ constructions and the lack of subject-auxiliary inversion into English. These mistakes show how deeply ingrained the natural language patterns may hinder the knowledge of the second language syntax especially in cases where the two languages belong to different typology.

Also, the analysis determined that students had problems with the use of auxiliary verbs and do-support, which means they lacked complete knowledge of English-specific syntax. There was also a role of cognitive processing limitation, where constructing WH-questions with embedded clause or multi-dependencies, mental demands of constructing grammatically correct question surpassed current level of proficiency among the learners. Furthermore,

students were insensitive to Universal Grammar constraints, including subjacency, island effects, which also suggests the inability to reset parameters and internalize deep syntactic rules.

Regardless of these problems, the post-test results indicate that the structured and targeted teaching can contribute to the improvement of the skills of forming WH-questions, as the learners can acquire these skills to a greater degree. The learners showed significant improvement on the simpler sentence transformations and a partial improvement on WH-in-situ errors indicating that they were improving in their interlanguage mastery. These advances explain why precise pedagogical treatment can help syntactic learning and address fossilized mistakes.

Thus, the research concludes that teaching English WH-question structures to learners with Urdu background should be done based on the cross-linguistic and cognitive knowledge. Sensitivity to the structural differences between Urdu and English should be incorporated into the instruction, complex sentence patterns should be practiced frequently and in context and the amount of input presented in a native-like style should be increased. Educators can facilitate more effective outcomes in second language learning by matching instructional strategies to the development needs of learners. This study makes a positive contribution to the burgeoning literature of SLA, provides practical implications on curriculum planning, pedagogic approach and further research on syntactic knowledge of ESL students in Pakistan.

Recommendations

Following the results of the research, a number of recommendations can be addressed to improve teaching and learning English WH-question formation among Pakistani ESL students. To begin with, English language teaching in Pakistani classrooms needs a contrastive approach wherein the syntactic disparities amid Urdu and English are highlighted directly. Given that several errors can be attributed to L1 transfer, learners should be guided to unlearn the native language syntax that is inconsistent with English syntax particularly on WH-fronting and subject-auxiliary inversion. To increase the metalinguistic awareness of the learners, teachers need to directly contrast Urdu and English sentence patterns side-by-side with each other.

Secondly, it can be suggested that auxiliary verbs and do-support should be introduced step-by-step and contextually by the teachers with many examples and discussing meaningful exercises in the transformation of sentences. Particular concern should be raised towards making students aware of the use of auxiliary verbs to form question and when to use them. These features can be internalized through repetitive drills, guided use and sentence construction tasks based on inversion rules.

Thirdly, the results confirm the necessity of providing clear explanations about the rules of Universal Grammar (UG) e.g., subjacency and island effects. Such complex constructions like long-distance Wh-movement should be taught scaffolded, in simplified form, and progressively complex. Error analysis activities such as analysing ungrammatical forms and correcting them should be used by teachers to bring about the awareness in learners to understand the underlying rules of syntax.

Also, to counter the lack of natural exposure to the English language, one is obliged to raise the input of creative and natural-like input to the learners. Syntactic development can be supported with listening activities with native speaker dialogues, reading comprehension exercises with conversation English and a chance to interact in English in the classroom. The use of media (e.g., English films, podcasts and books) can also be used to encourage the use of English outside the classroom and, therefore, strengthen proper grammatical structures.

Furthermore, the curricula of the English language in the schools of the public sector should be changed to incorporate the teaching of communicative grammar where grammar is offered in contexts of conversation, not as an independent course. Grammar can be incorporated into

speaking and writing activities that focus on real-life situations, thus helping learners find their studies more effective and meaningful.

Lastly, teacher training programs in the future should impart knowledge of second language acquisition theories to English language instructors more so the Principles and Parameters model and efficient methods of dealing with L1 interference. Educators must be prepared to identify the syntactic mistakes and provide them with instructions according to their individual needs and level of development.

When adopted, these recommendations have the potential to enhance the capacity of learners to develop correct and fluent structures of the WH-question format in English, which results in a general increase in the level of grammatical proficiency and communicative success.

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