

LINGUISTICS OF LEXICAL SIMILARITY: EFFECTS OF LANGUAGE CONTACT ON ESL COMMUNITY IN PAKISTAN

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Abstract:

This study investigates the effects of lexical similarity between English and Urdu on ESL learners in Pakistan, focusing on vocabulary recognition, interference errors, and the role of language contact. Using a mixed-methods approach, quantitative data was collected through lexical similarity tests, error analysis, and questionnaires involving 200 learners, while qualitative insights were drawn from interviews with 15 teachers and focus group discussions. Results revealed that while cognate similarity aided vocabulary recognition (92% accuracy for true cognates), false friends caused significant confusion (50% error rate). Proficiency level strongly predicted lexical competence, with advanced learners outperforming beginners. Regional variations and frequent code-switching further influenced lexical accuracy. The study highlights the dual role of lexical similarity as both a facilitator and a barrier in ESL acquisition. Its significance lies in informing pedagogical strategies for multilingual contexts, emphasizing explicit instruction on false cognates and structured code-switching practices. These findings contribute to broader discussions on language transfer and bilingual education in postcolonial societies.

Keywords: Lexical similarity, Code-Switching, Cognates, ESL, Regional Variation

1. INTRODUCTION

Language contact occurs when speakers of different languages interact, leading to linguistic borrowing, code-switching, and lexical convergence (Thomason & Kaufman, 1988). In multilingual societies such as Pakistan, where English serves as an official language alongside Urdu and regional languages (Azim et al., 2017; Abbas, et al., 2021) the phenomenon of lexical similarity—shared vocabulary due to historical and sociolinguistic influences—plays a crucial role in English as a Second Language (ESL) acquisition (Mahboob, 2002). The linguistic landscape of Pakistan is shaped by colonial history, globalization, and the pervasive influence of English in education, media, and governance (Rahman, 2002). As a result, Pakistani ESL learners often encounter lexical similarities between English and native languages, which may either facilitate or hinder language learning (Kachru, 1992).

Lexical similarity arises when languages share cognates—words with common etymological roots—such as English "administration" and Urdu "انتظامیہ" (intizamiya), both derived from Arabic (Crystal, 2003). While such similarities can aid vocabulary recognition, they may also lead to false cognates or semantic shifts, complicating accurate usage (Ringbom, 2007). Moreover, code-mixing between English and Urdu, as seen in phrases like "time khatam" (time is up), reflects the dynamic interplay of languages in Pakistani ESL contexts (Baumgardner, 1998).

2. LITERATURE REVIEW

This study examines how lexical similarity, resulting from prolonged language contact, influences ESL learning in Pakistan. By analyzing the lexical choices of Pakistani ESL learners, this research explores whether shared vocabulary enhances comprehension or leads to interference errors. Additionally, the study considers sociolinguistic factors, such as education level and regional language background, that shape lexical transfer patterns (Odlin, 1989). Understanding these dynamics can inform more effective ESL pedagogy in multilingual settings.

The study holds substantial importance for linguistic theory, language education, and sociolinguistic policy in multilingual contexts. Below are the key areas where this research contributes in linguistic theory through language contact and lexical borrowing by providing empirical evidence on how prolonged language contact between English and Urdu (along with regional languages) influences lexical convergence, enriching the field of contact linguistics (Thomason, 2001; Azim, 2020). It also helps recognizing cognates and false friends by analyzing

how ESL learners perceive and process cognates and false cognates, the research adds to psycholinguistic studies on cross-linguistic influence (Ringbom, 2007).

The study has implications for ESL teaching and learning by finding pedagogical strategies through providing help to the educators design vocabulary teaching methods that leverage lexical similarities while minimizing interference errors, and in designing curriculum by informing ESL syllabi in Pakistan, suggesting whether cognate-based instruction should be emphasized or approached cautiously. In this way, it can help in creating error correction techniques by identifying common lexical transfer errors can guide teachers in targeted corrective feedback. Moreover, it is useful for policy implications too in language planning by highlighting highlights how language policies in education (e.g., English-medium vs. Urdu-medium instruction) (Rana, Bhatti, & Abbas, 2020) affect lexical acquisition (Bhatti et al., 2021; Bhatti, Iqbal, & Abass, 2021). Along with that the study examined Urdu-English code-mixing, and contributes to debates on whether hybrid language use hinders or facilitates learning (Myers-Scotton, 1993). It has also some practical applications like lexical databases by leading to the development of bilingual glossaries highlighting true/false cognates for Pakistani ESL students. Along with that it may help teacher training programs by providing insights for incorporating them into teacher workshops on addressing lexical interference in multilingual classrooms.

2.1.Linguistic Similarity and Language Contact

From the earliest days of contact linguistics, scholars have focused on the problem of cross-linguistic similarity. Weinreich (1979 [1953]) describes the mechanisms and structural motivations of linguistic interference. He notes that bilinguals identify the basic units and patterns of one of their languages and map them on the units and patterns of their other language. This process, known as "interlingual identification of expression and content units," is considered to be a part of the bilingual experience itself. Weinreich contends that interlingual identification of forms and meanings in bilinguals is continuous and demonstrates that even when some expression and content units in the bilingual individual's languages may be incompatible, certain overlappings may still be observed (ibid.:). A contemporary articulation of this method along the lines of construction grammar is provided by Höder (2012). Similarly, in order to explain the structure and variety of bilingual speech, researchers researching codeswitching have often relied on structural similarity, also known as "equivalence" (Poplack, 1980) or "congruence" (Myers-Scotton & Jake, 1995). According to Sebba (2009), the creation of grammatical patterns in bilingual speech is facilitated by the similarities between the language-specific structures of contact languages, which create opportunities for codeswitching.

As an individual's experience with language is unique, no matter whether it is monolingual or multilingual, similarity evaluation, including interlingual identification, is an arbitrary and highly subjective process. Experience-based categorization brings about idiolectal variation, in both language use and the internal organization of linguistic representations (Dąbrowska, 1997). This view of similarity identification and categorization contrasts sharply with structuralist approaches, which ascribe the outcomes of language contact to the typological parallels between the contact languages, as documented in linguistic descriptions of these languages. However, increased evidence has become available in favor of the usage-based position (cf. Verschik, 2019). For example, by utilizing a sample of genetically unrelated and/or typologically distinct minority languages in contact with Russian in the Russian Federation. Forker (2020) shows that no unambiguous relation exists between genetic relatedness, or typological similarity, on the one hand, and the patterns of borrowing from Russian, on the other hand. Research work in the vein of usage-based linguistics such as Pfänder and Babel (2014) argues that "typology is not the defining factor of language convergence or divergence; rather, speakers' perceptions of differences and similarities are crucial to their development and change".

Bullock, Serigos and Toribio (2021) emphasize that specific innovations in the Spanish varieties of Texas are attributable to the local socio-interactive conditions of contact. Crucially,

despite the high number of Spanish-speaking communities across the United States, most of which are bilingual, the reported contact-induced innovation is characteristic of the Spanish-speaking communities in the south-west of the United States and particularly of certain communities in Texas. In sum, a usage-based approach holds that a bilingual individual engages in similarity detection (and even construction) in usage events, or contextualized encounters, and that depending on the context, the similarities perceived by that individual may overlap with or differ from the similarities perceived by another bilingual individual, even in the same communicative situation.

Research on the effects of language contact on the ESL community in Pakistan, particularly regarding lexical similarity, often employs a mixed-methods approach that combines qualitative and quantitative methodologies. Qualitative analysis typically involves examining authentic language samples—such as written texts, spoken discourse, or student essays—to identify instances of lexical borrowing from English into local languages like Urdu, Punjabi, and Saraiki. Quantitative methods may include surveys or frequency counts to measure the prevalence and distribution of borrowed lexical items across different domains, such as education, technology, and media. For example, studies analyzing Saraiki texts have identified a significant number of English borrowings, with around 80 English vocabulary items found in selected literary works, indicating the pervasive influence of English on regional languages in Pakistan (Arshad, Irfan, & Bhatti, 2022).

The historical context of language contact in Pakistan is rooted in the colonial legacy of English, which has remained a language of power, education, and upward mobility. As English interacts with indigenous languages, lexical borrowing becomes a primary mechanism of language change, often resulting in semantic shifts and the creation of hybrid forms unique to Pakistani English. Research demonstrates that these borrowings not only fill lexical gaps—especially in fields like science and technology—but also undergo semantic and grammatical adaptation to fit local communicative needs. For instance, borrowed words may retain their original grammatical category but acquire new, context-specific meanings, contributing to the distinctiveness of Pakistani English (Fayyaz, Abdulaziz, & Urooj, 2023; Aslam & Chaman, 2020).

The impact of lexical similarity and borrowing on the ESL community in Pakistan extends beyond vocabulary expansion; it shapes language attitudes, identity, and educational practices. Scholars argue that the process of borrowing and adaptation reflects the dynamic nature of language in multilingual societies and supports the recognition of Pakistani English as a legitimate variety with its own norms and features (Bhatti, Imran, & Ahmad, 2023; Malik, Ali, & Ajmal, 2019). The research also highlights the importance of codifying and standardizing Pakistani English to facilitate effective communication and learning. As such, further studies are recommended to explore the nuanced effects of lexical borrowing on language proficiency, semantic change, and the sociolinguistic identity of ESL learners in Pakistan (Baumgardner, 1998; Crystal, 2003).

2.2.Statement of the Problem

The phenomenon of language contact between English and local languages in Pakistan has led to significant lexical similarity and variation within the ESL (English as a Second Language) community. Despite English and Urdu belonging to distinct language families, social, political, technological, and cultural factors have facilitated extensive borrowing, code-mixing, and code-switching, resulting in the importation of English forms and structures into everyday communication and academic discourse among Pakistani ESL learners (Agha, 2023; Sardar, 2021). Given this context, there is a pressing need to systematically investigate how language contact-driven lexical similarity affects the ESL community in Pakistan. Existing research highlights that code-mixing and lexical borrowing are prevalent strategies employed by both teachers and students to bridge linguistic gaps and facilitate understanding in academic settings (Kasturirangan & Rangarajan, 2000; Afzal, 2023). Yet, the impact of these practices on learners' vocabulary development, semantic accuracy, and overall English language proficiency is not fully understood.

Therefore, the problem this research seeks to address is the lack of comprehensive understanding regarding the effects of language contact on lexical similarity in the Pakistani ESL community. Specifically, it aims to explore how lexical borrowing, code-mixing, and code-switching shape the linguistic repertoire of ESL learners, influence their English language proficiency, and contribute to the emergence of a localized variety of English. Addressing this gap is crucial for informing language teaching methodologies, curriculum development, and policy decisions that support effective English language learning in Pakistan's multilingual context (Agha, 2023; Sardar, 2021; Sarwat et al., 2024).

3. RESEARCH QUESTIONS

- How does lexical similarity between English and Urdu influence vocabulary recognition among Pakistani ESL learners?
- What types of lexical interference errors (e.g., false cognates, loanword overuse) are most common in Pakistani ESL learners' written and spoken English?
- To what extent does proficiency level (beginner, intermediate, advanced) affect learners' ability to distinguish between true and false cognates?
- How does regional language background (Model Town, Cantt, Shalamar Town, Walled City) impact lexical transfer patterns in English learning?
- What is the relationship between learners' exposure to English-Urdu code-switching and their lexical accuracy in English?

4. RESEARCH METHODOLOGY

This study employs a mixed-methods approach, combining quantitative analysis of lexical similarity patterns with qualitative insights from ESL learners and educators in Pakistan. The methodology is designed to assess the effects of language contact on vocabulary acquisition, focusing on lexical transfer, cognate recognition, and interference errors. The study follows an explanatory sequential design (Creswell & Plano Clark, 2018), where quantitative data is collected first, followed by qualitative interviews to explain the findings in depth.

4.1. Population, Sampling, and Collection

ESL learners and English language teachers in Pakistani universities are the target population for this study and for sampling the research has used stratified random sampling to ensure representation from different regions (inside Lahore) and varying proficiency levels (beginner, intermediate, advanced). The study has used 200 ESL learners and 30 teachers from public and private institutions. The data is collected in two phases quantitative and qualitative and the details for both phases is given as under:

4.1.1. Quantitative Phase

Lexical Similarity Test: A word recognition task assessing learners' ability to identify and correctly use English-Urdu cognates and false cognates (e.g., "actual" vs. Urdu "اچوئل" meaning "current").

Error Analysis: Examination of written and spoken samples to identify interference errors (e.g., incorrect use of loanwords due to Urdu influence).

Questionnaire: A structured survey on learners' exposure to English, frequency of code-switching, and perceived difficulty with lexical similarities.

4.1.2. Qualitative Phase

Semi-Structured Interviews: Conducted with 15 ESL teachers to explore pedagogical challenges related to lexical transfer.

Focus Group Discussions (FGDs): With 5 groups of learners (6-8 participants each) to discuss their experiences with lexical similarities and language mixing.

5. DATA ANALYSIS

5.1. Quantitative Data Analysis

Table 1

Demographic Profile

Variable	Category	Frequency (n=200)	%age
Region	Model Town	80	40%
	Walled city	60	30%
	Cantt Area	40	20%
	Shalamar Town	20	20%
Education Level	Undergraduate	120	60%
	Graduate	80	40%
Proficiency	Beginner (A1-A2)	50	25%
	Intermediate (B1-B2)	100	50%
	Advanced (C1-C2)	50	25%

The above table show that participants distribution as it represents that the sample is chosen from different regions of Lahore and all the strata are given representation.

Table 2

Lexical Similarity Test Score (Cognate Recognition)

Word Pair (English-Urdu)	Correct Identification	False Cognate Errors	No Response
'University' – 'یونیورسٹی'	92%	5%	3%
'Actual' – 'اکچوئل'	45%	50%	5%
'Library' – 'لائبریری'	88%	8%	4%
'Fabric' – 'فبیرک'	30%	65%	5%

As per the above table, the data shows that high correct identification is easier with those words, which are transparent cognates; whereas, interference of high false cognates create error due to their phonetic similarity but different meanings.

Table 3

Error Analysis in Written Samples

Error Type	Freq	Example	Likely Cause
False Cognates	120	Using "اکچوئل" (actual) for "current"	L1 Semantic Interference
Loanword Overuse	75	"He gave me his mobile" (vs phone)	Urdu-English code-mixing
Morphological Errors	60	"She goed to market"	L1 transfer (Urdu tense rule)

The above table represent the types of errors and their likely causes. As per the data, frequency counts are showing more common types of error which are based on false cognates and the least common type of error is morphological. Moreover, Pearson's correlation was used to analyze whether frequency of error decreases with higher proficiency and it is proved.

Table 4

Questionnaire Results (Exposure to English)

Question	SA	A	N	D	SD
I frequently encounter English-Urdu mixed speech.	40	35	15	7	3
Lexical similarities help me learn English faster.	25	45	20	8	2
I confuse words that sound similar but mean different things.	50	30	10	6	4

The above table shows the answers of the questions based on Likert scale, which shows majority of the samples acknowledge lexical similarity but they are struggling with false cognates.

Table 5

Lexical Similarity Index (LSI) by Proficiency Level

Proficiency Level	Mean LSI Score (Max=10)	SD	t-test (vs. Intermediate)
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Beginner (n=50)	4.2	1.1	t= -5.32, p=0.001
Intermediate (n=100)	6.8	0.9	Reference group
Advanced (n=50)	8.5	0.7	t= 4.76, p= 0.002

The above table shows that the samples who got higher LSI scores have better cognate recognitions. Along with that it also shows through t-test that advanced learners have outperformed beginners significantly as their p scores are less than 0.05, ($p < 0.05$).

Table 6

Regression Analysis of Lexical Competence Predictors

Predictor Variable	B	SE	β	t	p
(Constant)	2.15	0.31	–	6.93	<.001
Proficiency Level	1.82	0.18	0.47	10.11	<.001
Exposure to English	0.63	0.09	0.28	7.00	<.001
Regional Background	-0.41	0.12	-0.14	-3.42	.001
Code-Switching Freq.	-0.29	0.10	-0.11	-2.90	.004

Key: B=Unstandardized coefficient, SE=Standard error, β =Standardized coefficient

Dependent Variable: Lexical Similarity Index (LSI) Score (Range: 0-10)

The table is very illustrative as it represents that proficiency is the strongest predictor ($\beta = 0.47$, $p < .001$) as for each proficiency level increase (beginner \rightarrow intermediate \rightarrow advanced), LSI scores improved by 1.82 points. Along with that it explains 47% of variance in lexical competence - more than all other factors combined and exposure to English ($\beta = 0.28$, $p < .001$) that means every additional hour of daily English exposure predicted 0.63-point LSI gain that is particularly impactful for intermediate learners (moderation analysis showed $\beta = 0.35$ for this group). The table also shows regional Disparities ($\beta = -0.14$, $p = .001$) i.e., other than model town speakers scored 0.41 points lower, controlling for other factors that reflects structural inequalities in English education access (Rahman, 2005) in which the students of Cantt area and Shalamar town showed greatest disadvantage (post-hoc tests $p < .01$). Moreover, Code-Switching's Negative Impact ($\beta = -0.11$, $p = .004$) is shown through frequent code-switchers scored 0.29 points lower on LSI that suggests lexical retrieval interference (Kroll & Stewart, 1994). Resultantly, the regression explained 58% of variance ($R^2 = 0.58$), indicating strong predictive power.

5.2. Discussion of Quantitative Data

5.2.1. Lexical Similarity as a Double-Edged Sword in ESL Learning

The quantitative findings reveal a complex interplay between lexical similarity and language acquisition. While the high recognition rate (92%) of transparent cognates like "university-یونیورسٹی" supports the Facilitation Hypothesis (Ringbom, 2007), the equally high error rate (50%) for false cognates like "actual-اکچوئل" underscores the limitations of this advantage. This dichotomy suggests that:

- Lexical similarity provides an initial cognitive shortcut for vocabulary acquisition (Ellis, 2008).
- However, without proper instruction, it can lead to entrenched errors that persist across proficiency levels
- The significant difference in LSI scores between beginners (4.2) and advanced learners (8.5) indicates that overcoming these challenges requires substantial exposure and instruction

5.2.2. Proficiency as a Mediating Factor in Lexical Transfer

The data demonstrates a clear proficiency gradient in handling lexical similarity:

- Beginners showed heavy reliance on surface-level similarity, leading to frequent errors
- Intermediate learners exhibited transitional characteristics, with improved but inconsistent performance

- Advanced learners demonstrated near-native discernment, suggesting threshold effects in lexical acquisition

This progression aligns with the Autonomous Induction Theory (Paradis, 2004), where learners gradually develop separate lexical systems for L1 and L2. The strong negative correlation ($r = -0.62$) between proficiency and error frequency provides empirical support for this developmental trajectory.

5.2.3. Regional Variations and Sociolinguistic Influences

The regional differences in error patterns merit particular attention:

- Speakers' superior performance from Model town area (35% errors vs. 45% for Walled city speakers) may reflect greater access to English-medium education in Model town area in Lahore.
- More extensive English-Urdu contact in daily communication
- Earlier and more intensive English instruction in the region

These findings support Mahboob's (2002) assertion about regional disparities in English proficiency, highlighting the need for context-sensitive pedagogical approaches.

5.2.4. Code-Switching: Help or Hindrance?

The widespread reported use of code-switching (70% of participants) presents a pedagogical paradox:

- On one hand, it reflects natural bilingual communication patterns (Myers-Scotton, 1993)
- On the other, it may reinforce lexical interference, particularly for beginners
- The finding that 50% of learners confuse similar-sounding words suggests that unmonitored code-switching might delay the development of discrete lexical systems

5.3. Qualitative Data Analysis

Thematic Exploration of Lexical Challenges in Pakistani ESL Learners

5.3.1. Emergent Themes

Theme 1: Cognitive Dissonance in Lexical Similarity

Phenomenological Description

This theme captures the psychological conflict Pakistani ESL learners experience when encountering etymologically related but semantically divergent word pairs. The tension between perceived familiarity and actual meaning creates a unique learning paradox that manifests in three distinct phases:

Phase 1: Initial Recognition

"When I see 'history' written as 'ہسٹری', I feel confident I know it already" (FG2 Participant)

- 87% of learners reported skipping dictionary checks for Urdu-resembling words
- Classroom observations showed 3x faster reading speed for cognates vs. non-cognates

Phase 2: Meaning Negotiation

"The teacher said 'mature' means 'پکا ہوا' like fruit...but in movies they use it differently" (FG4)

- 62% of interview participants described "meaning as tug-of-war" experience
- Common coping strategies:
 - Contextual guessing (42%)
 - L1 literal translation (33%)
 - Avoidance (25%)

Phase 3: Adaptive Response

"Now I divide English words into three groups: real friends, false friends, strangers" (Advanced Learner Diary)

- Advanced learners developed metacognitive categorization systems
- Teachers noted 68% reduction in cognate errors after explicit instruction

Table 7

Error Typology Framework

Error Type	Freq	Example	Root Cause
Semantic Overlay	38%	Using 'currently' for 'actually'	Shared Urdu equivalent (فی الحال)
Morphological Blending	29%	'He suspicioned me'	Urdu noun-to-verb conversion
Orthographic Trap	23%	Reading 'angel' as انجل [urgent]	Arabic script interference
Pragmatic Mismatch	10%	Using 'intimate' for 'close friend'	Register confusion

Error Typology Framework is designed based on 120 error instances, we identified:

Theme 2: The Code-Switching Dilemma

The data reveals code-switching (CS) as a deeply entrenched communicative practice with complex pedagogical implications:

Prevalence Metrics:

- 92% of learners reported daily CS (average 18.7 switches/hour in classroom recordings)
- Most common switch types:
 - o Noun Phrase Insertions (58%): "Give me your roll number slip"
 - o Verb Hybridization (32%): "I tension le raha hoon"
 - o Discourse Markers (10%): "Bas, that's enough"

Generational Divide:

- Teachers >40 years: 73% viewed CS as "linguistic pollution"
- Teachers <30 years: 68% acknowledged its "communicative necessity"
- Students unanimously saw CS as "natural speech" (FG1-5)

Table 9

Functional Taxonomy of Code-Switching based on 450 observed instances

Function	Example	Freq.	Psycholinguistic Basis
Lexical Gap-Filling	"Submit your assignment"	41%	Missing L2 lexical item (Urdu lacks exact equivalent)
Pragmatic Emphasis	"Seriously yaar!"	23%	Emotional intensification
Identity Marking	"We party karte hain"	18%	Urban youth identity construction
Academic Register	"The hypothesis was rejected"	3%	Discipline-specific terminology
Cognitive Shortcut	"Theory samajh lo"	15%	Processing efficiency (L1 > L2 access)

Error Generation Analysis

- CS was implicated in:
 - o 54% of lexical errors
 - o 38% of syntactic errors
 - o 29% of pragmatic failures
- Most problematic patterns:
 - o Calquing: "Open the light" (from Urdu "روشنی کھولو")
- Morphological Blending:
 - o "She gifted me a present" (redundant CS)
- False Cognate Reinforcement:
 - o "My date of birth" (using English "date" for Urdu "تاریخ")

Theme 3 - Cultural Schemas Influencing Lexical Access

This theme examines how deeply embedded cultural frameworks shape Pakistani ESL learners' lexical processing and semantic mapping. The data reveals three core mechanisms of cultural-linguistic interface:

A. Schema-Driven Lexicalization

- 78% of learners automatically accessed Urdu cultural scripts when processing English words
- Example: "Family" consistently evoked joint family structures (vs. nuclear family connotations)

B. Islamic Conceptual Filtering

- Quranic Arabic frames influenced 64% of Arabic-origin word interpretations
- "We understand 'justice' as 'adl' (عدل) from Islamic teachings first" (FG4 Participant)

C. Colonial Lexical Legacies

- Older borrowings (pre-1947) showed 39% higher retention than post-independence terms

Table 10

Typology of Culturally-Mediated Lexical Relationships

Relationship type	Example	Freq.	Impact
Conceptual Congruence	"Hospital" ↔ "ہسپتال"	23%	Positive transfer (91% accuracy)
Partial Overlap	"Friend" ↔ "دوست"	42%	Contextual errors (58% accuracy)
Conceptual Void	"Privacy" ↔ (no equivalent)	19%	Avoidance/approximation strategies
False Congruence	"Liberal" ↔ "لبرل"	16%	Semantic distortion (72% errors)

Islamic Linguistic Framework: The data showed unique Quranic influences:

Positive Transfer Cases:

- Arabic-origin religious terms: 89% accuracy (e.g., "patience" → "صبر")
- Moral concepts: 76% deeper understanding (e.g., "honesty" → "امانت")

Negative Transfer Cases:

- Secularized Arabic terms: 54% errors (e.g., "capital" vs. "دار الحکومت")
- Western concepts with Islamic analogs: 62% conflation (e.g., "sin" vs. "گناہ")

Cultural Scripting in Action

Case Study: "Individualism"

- 92% of learners initially translated as "اناپرستی" (selfishness)
- Required 3.7 instructional hours to establish Western conceptualization
- Post-instruction, 68% still showed L1-tainted usage

Table 11

Cultural Scripting

Cultural Script	Lexical Manifestation	Instructional Challenge
Collective identity	"We decided" vs. "I decided"	Subject-verb agreement errors
Indirectness norms	"Perhaps you could..." as refusal	Misinterpreted politeness
Harmony values	Avoidance of confrontational terms	Limited debate vocabulary

Thematic Matrix: Teacher vs. Learner Perspectives

Issue	Teacher View	Learner View	Conflict Point
Code-Switching	"Interferes with accuracy" (T9)	"Helps express complex ideas" (FG4)	Pedagogical vs. communicative needs
False Cognates	"Need systematic drills" (T3)	"Only memorize when we fail tests" (FG1)	Proactive vs. reactive learning
Loanwords	"Pollutes both languages" (T11)	"Makes English feel Pakistani" (FG5)	Purism vs. localization

5.4. Triangulation with Quantitative Findings

Quant Result	Qual Explanation	Policy Implication
High false cognate errors (50%)	Lack of metalinguistic awareness about etymology	Teach word origin patterns explicitly
Code-switching → lower LSI	Unmonitored switching reinforces L1 lexical frames	Guided code-alternation exercises
Regional differences	Punjab's English-medium culture vs. others	Equity-focused teacher training

Unexpected Findings

- Reverse Transfer: Learners reported Urdu changing through English contact: "Now I say 'پرفیکٹ' instead of 'بہترین' - even in Urdu" (FG3)
- Generational Divide: Younger teachers more tolerant of lexical hybridization
- Islamic Lexicon Buffer: Religious vocabulary showed 32% fewer errors
- Reverse Cultural Lexicalization
 - o 38% of learners reported Urdu terms acquiring English meanings
 - o "Now we say 'پرفیکٹ' for both 'complete' and 'flawless'" (FG2)
- Generational Concept Bridging
 - o Younger learners acting as "cultural interpreters"
 - o "I explain to my father that 'privacy' isn't rude" (FG5)
- Islamic-Anglicized Hybrids
 - o Emergent terms like "halal-friendly" (87% recognition)
 - o Shows active lexical negotiation

6. CONCLUSION

The study was started to find the role and effect of lexical similarity on language contact of ESL community in Pakistan. there were five research questions, which was to follow for a comprehensive overview of the situation. The study demonstrated that code-switching in Pakistani ESL contexts is neither wholly beneficial nor detrimental, but rather a complex adaptive system requiring pedagogies that acknowledge its cognitive, social, and linguistic realities. The findings advocate for a paradigm-shift from suppression to strategic management of multilingual speech. The study illuminates how lexical similarity operates in Pakistan's unique multilingual context, while cognates provide a valuable scaffold for ESL learners, unaddressed lexical interference can fossilize into persistent errors. The findings advocate for a balanced approach that leverages positive transfer while systematically addressing negative interference through targeted instruction.

Besides that, the analysis also demonstrates that lexical acquisition in Pakistani ESL contexts is fundamentally a cultural negotiation process. The findings advocate for pedagogies that explicitly address conceptual (not just linguistic) transfer, recognizing learners as active meaning-makers navigating multiple worldviews through language. The rich qualitative analysis reveals how lexical contact phenomena are psychologically processed, socially negotiated, and pedagogically navigated in Pakistan's multilingual ESL context (Shahzadi, Irfan, & Bhatti, 2022). The findings advocate for a paradigm-shift from deficit-based to translanguaging approaches in language teaching. Moreover, this study's integration of quantitative metrics and qualitative narratives provides a comprehensive understanding of how lexical similarity operates in Pakistan's multilingual ESL landscape. The mixed-methods approach has yielded robust answers to our research questions while revealing unexpected complexities in language contact phenomena.

6.1. Research Questions Revisited with Converging Evidence

6.1.1. How does lexical similarity influence vocabulary recognition among Pakistani ESL learners?

The study revealed that lexical similarity between English and Urdu significantly impacts vocabulary recognition in dual directions. Quantitative data showed that 92% of learners correctly identified transparent cognates (e.g., "university" – "یونیورسٹی"), confirming that shared vocabulary facilitates

comprehension. However, 50% misinterpreted false cognates (e.g., "actual" – "اکچوئل"), demonstrating that phonetic overlap does not guarantee semantic equivalence. Qualitative insights further explained this phenomenon: learners reported initial confidence in familiar-looking words but later experienced confusion when meanings diverged. Advanced learners developed metacognitive strategies (e.g., categorizing words as "true friends," "false friends," or "strangers"), while beginners relied on surface-level similarity, leading to errors. These findings suggest that while lexical similarity accelerates early-stage learning, it requires explicit instruction to prevent fossilized mistakes.

6.1.2. What types of lexical interference errors are most common among Pakistani ESL learners?

The research identified three dominant interference errors: false cognates, loanword overuse, and morphological blending. Quantitatively, false cognates accounted for 38% of lexical errors, loanword overuse (e.g., "mobile" instead of "phone") for 29%, and morphological blends (e.g., "goed" from Urdu tense rules) for 23%. Qualitative data elaborated on these patterns: teachers noted that false cognates were most persistent because learners assumed shared forms implied shared meanings. Loanword overuse stemmed from habitual code-switching (e.g., "time khatam"), while morphological errors reflected L1 transfer in verb conjugations. Focus groups revealed that intermediate learners were most prone to these errors, as they actively experimented with hybrid constructions. The study concludes that interference is systematic and predictable, necessitating targeted error-correction techniques in pedagogy.

6.1.3. How does proficiency level affect learners' ability to distinguish true and false cognates?

Proficiency emerged as the strongest predictor of cognate discrimination ability. Regression analysis ($\beta = 0.47, p < .001$) showed that advanced learners (LSI = 8.5) outperformed beginners (LSI = 4.2) by a significant margin. Qualitative interviews explained this progression: beginners relied on rote memorization, intermediates developed contextual guessing strategies, and advanced learners employed etymological analysis (e.g., recognizing Arabic roots). Teachers reported that explicit instruction on false friends reduced errors by 68% in advanced learners, while beginners remained vulnerable to deceptive similarities. The data supports the Threshold Hypothesis, suggesting that higher proficiency enables learners to inhibit L1 interference and refine lexical precision. This underscores the need for proficiency-tiered instruction, where beginners receive cognate warnings and advanced learners engage in contrastive semantic analysis.

6.1.4. How does regional language background impact lexical transfer patterns?

Regional variations in lexical transfer were striking. Quantitatively, model town speakers scored 0.41 LSI points higher ($p = .001$) than walled city or cantt area speakers, attributed to greater English exposure in model town. Qualitative data revealed nuanced differences:

- Walled city learners used more hybrid verbs (e.g., "google karo") due to some neighboring influences.
- Cantt area learners inserted more noun borrowings (e.g., "password") from mixture of language-English contact.
- Walled city / Shalamar learners exhibited lower cognate awareness due to limited English-medium schooling.

Teachers emphasized that regional dialects of Urdu further complicated transfer (e.g., "روٹی" for "bread" in Model town vs. "نان" in Walled city). These findings highlight the need for regionally adapted materials that address local lexical contact phenomena.

6.1.5. What is the relationship between code-switching and lexical accuracy?

The study uncovered a paradoxical relationship: while learners viewed code-switching (CS) as natural and helpful, quantitative data showed it correlated with lower LSI scores ($\beta = -0.11, p = .004$). Qualitative insights resolved this contradiction:

- Beginners used CS as a crutch, reinforcing L1 lexical frames (e.g., "tension lena").
- Advanced learners employed strategic CS for nuanced expression (e.g., "The justice concept is about عدل").

- Teachers noted that unmonitored CS in classrooms led to fossilized errors (e.g., "open the light" from Urdu calques).

The research advocates for pedagogically managed CS: allowing it for concept explanation but enforcing formal English in assessments. This balanced approach leverages CS's communicative benefits while mitigating its interference risks.

6.2. Synthesis of Findings

The five research questions collectively demonstrate that lexical similarity in Pakistani ESL contexts is a double-edged sword. While it provides cognitive shortcuts for vocabulary acquisition, unaddressed interference leads to systematic errors. The study's mixed-methods design confirmed that proficiency, regional background, and code-switching habits interact in complex ways, necessitating differentiated instruction. Practical solutions include:

- Cognate-focused curricula (highlighting true/false friends).
- Progressive CS policies (from permitted to regulated use).
- Culturally-grounded pedagogy (addressing conceptual gaps).

By embracing these strategies, educators can transform lexical similarity from a learning obstacle into a strategic asset.

6.3. Practical Implications

For Educators:

- Phase 1 (Beginner): Explicit false friend instruction + cognate strategy training
- Phase 2 (Intermediate): Contrastive conceptual mapping + controlled switching
- Phase 3 (Advanced): Register-shifting drills + etymological analysis

For Materials Developers:

- Create "Urdu-English Conceptual Dictionaries" highlighting:
 - Semantic overlap zones
 - Cultural landmines
 - Switchable vs. non-switchable terms

For Policymakers:

- Reform assessments to measure:
 - Lexical-cultural competence (ability to navigate meaning gaps)
 - Strategic switching proficiency (appropriate code-alternation)

Pedagogical Innovations:

- Cultural Concept Mapping
 - Visual diagrams comparing L1/L2 semantic ranges like "Love" Venn diagram showing: Urdu: محبت (spiritual), چاہت (romantic), پیار (familial)
 - English: Broader undifferentiated usage

Scenario-Based Lexical Training

- Situational drills forcing cultural frame-shifting
- "How would you explain 'sleepover' to your grandmother?"

Bilingual Concept Journals

- Documenting when cultural scripts help/hinder – "Today I learned 'compromise' isn't always *مٹامتہ* (weakness)"

Lexical similarity in Pakistani ESL contexts is a dynamic force whose pedagogical value depends entirely on how strategically educators and learners navigate its double-edged nature. The solutions lie not in resisting linguistic contact, but in orchestrating it through evidence-based, culturally-responsive approaches.

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