



## THE ROLE OF PSYCHOTYPOLOGY IN CROSS-LINGUISTIC INFLUENCE: A STUDY OF PASHTUN MULTILINGUAL LEARNERS

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## ABSTRACT

The study examines the influence of Psychotypology on Cross-Linguistics Influence (CLI) among Pashtun multilingual learners. CLI refers to how one's proficiency in one language affects their ability to recognize, understand, process, store, and produce words in another language. While CLI has fascinated researchers studying second and third language acquisition, its unique role in Pashtun multilingual learners, particularly the learner's subjective sense of the linguistics distance between their (L1) Pashto, (L2) Urdu and the target language (L3) English, remains unexplored. This research study makes use of Kellerman's (1986) concept of Psychotypology to determine the individual perception of Pashtun Multilingual learners about the linguistic distance between their background languages Pashto (L1), Urdu (L2) and the target language (L3). Furthermore, it attempts to determine which of the two background languages are considered closer to English and which one is the potential source language of transfer in the production of L3 English. A quantitative descriptive method is mainly used, along with some qualitative insights from open ended responses. Data were collected through an online questionnaire administered to 60 Pashtun multilingual learners from the department of English. Findings reveal a mixed perception of closeness between the three languages. Urdu is considered closer to English in grammar, vocabulary and morphology, while Pashto is deemed closer to English in Phonetics and Phonology. Concerning transfer, findings reveal that Pashto language is used for conceptual thinking and initial idea formulation, while learners rely on Urdu for lexical retrieval and grammatical structuring during English production. Some learners' responses also showed inclinations towards code-switching and language mixing during English comprehension



and production. Understanding learner's psychotypology is helpful in determining language transfer and improving language acquisition.

**Keywords:** Cross-linguistic-Influence, Psychotypology, Pashtun multilingual learners, Language distance, Language transfer, Language acquisition

## INTRODUCTION

### Background of the Study

Researchers who study the acquisition of second and third languages have long been fascinated by the phenomena of cross-linguistic influence. This phenomenon has been referred to by a number of names, including language interference, language transfer, and native language influence. Cross linguistic Influence (CLI), in the words of Jarvis (2009, p. 99), is "the influence that a person's knowledge of one language has on their recognition, interpretation, processing, storage, and production of words in another language." Jarvis and Pavlenko (2008) have provided an extensive and well-structured analysis of the affective elements in CLI. They divided the established variables in the literature into five groups. Language and psycholinguistic elements are included in the first group. In this category one way of determining the impact of previous languages on the acquisition of a new language is through typology. Typology pertains to the objective distance between two languages, encompassing the actual degree of similarities and differences. The learning process can be impacted by individual views and attitudes about languages, so it is crucial to keep this in mind when calculating linguistic distance. In light of this, Kellerman (1986) proposed that Psychotypology, the learner's perception of the distance between their first and second languages, rather than typology is what influences transfer. It encompasses the perceived degree of similarity and differences between two languages. When the learner perceives two languages as being closer, the likelihood of successful transfer increases and vice versa. This perception-based mechanism was later expanded by Rothman (2010) in his Typological Proximity Model, which formalized how learners' perceived similarity predicts transfer patterns in L3 acquisition.

### Statement of the Problem

The research at hand aims to investigate the role of Psychotypology in cross-linguistic influence among Pashtun multilingual learners who have two potential source languages; Pashto (L1) and Urdu (L2), from which transfer may occur during their learning of English (L3). The first aim of the study is to explore the learner's perception about the linguistics distance between their L1, L2 and L3. Moreover, it investigates which language could be the potential source of transfer in the production of English. By understanding this complex relationship of Psychotypology and cross-linguistic influence, the research adds to the better understanding of cognitive and linguistic factors that shape language transfer in multilingual environment.

This led us to the following research questions and research objectives.

### Research Objectives

- To investigate how Pashtun multilingual learners of English perceive the linguistic distance between L1 Pashto, L2 Urdu, and L3 English.
- To identify which of the background languages Pashto or Urdu is perceived closer to English
- To investigate the source language of transfer



## **Research Questions**

- How do Pashtun multilingual learners perceive the linguistic distance between L1 Pashto, L2 Urdu, and L3 English?
- Which of the background languages Pashto or Urdu is perceived closer to English?
- Which of the background language L1 or L2 can be the source language of transfer to English?

## **Significance of the Study**

This study aims to address these objectives and contribute to the existing literature on language acquisition and cross-linguistic influence, particularly exploring the case of Pashtun multilingual learners and their psychotypology about Pashto, Urdu and English. The findings of the research may provide deeper insights into the role of Psychotypology in language transfer and inform language teaching practices for Pashtun multilingual learners of English to design effective learning strategies for addressing learners' Psychotypology and promote successful language acquisition.

## **LITERATURE REVIEW**

### **Multilingualism**

Multilingualism is a complex phenomenon that can be examined from various perspectives in fields like psycholinguistics, sociolinguistics, and education. Currently, the widely accepted perspective considers multilingualism as the overarching term in the field. It is commonly employed to describe situations involving the use of two or more languages (Aronin & Singleton, 2008). Bilingualism and Trilingualism can be seen as specific examples or manifestations of multilingualism. There are different definitions of multilingualism. Li (2008) provides a definition of a multilingual individual as someone who has the ability to engage in communication using multiple languages, both actively (speaking and writing) and passively (listening and reading). Another well-known definition by the European Commission (2007) states that multilingualism refers to the ability of societies, institutions, groups, and individuals to regularly engage with more than one language in their daily lives. These definitions are crucial for discussing different dimensions of multilingualism, such as the individual vs societal aspect, the proficiency vs use aspect, and the distinction between bilingualism and multilingualism (Li, 2008; European Commission, 2007).

As Cenoz (2013) emphasizes, multilingualism is a multifaceted phenomenon which incorporates both individual and social dimension. It can be seen as the ability of individuals to communicate in multiple languages, as well as the use of languages within a society. Individual multilingualism is sometimes referred to as Plurilingualism, which is defined by the council of Europe as the "repertoire of varieties of language which many individuals use." At the societal level, there is an important distinction between additive and subtractive multilingualism. Additive multilingualism occurs when a language is added to an individual's linguistic repertoire while their first language continues to be developed. Subtractive multilingualism on the other hand means when a new language



replaces some aspects of the existing languages known to the learner. Additive multilingualism is more common when speakers of a majority of language acquire additional languages, whereas subtractive multilingualism often occurs when immigrant school children are compelled to shift to the language of the host country without sufficient support for developing their native language.

Two other perspectives are also equally important while examining multilingualism i.e. ‘proficiency’ and ‘use’. While considering ‘proficiency’, there are multiple definitions of multilingualism. Some definitions emphasize and accept higher proficiency in a language for multilingualism, while others accept minimal competence. Balanced Multilingualism that is high level of proficiency in multiple languages is no longer the standard, rather unbalanced multilingualism, which is having varying degree of proficiency, is acceptable. The other dimension of multilingualism that is ‘use’ emphasizes the practical application of languages in daily life. The key quality for multilingualism according to this perspective is being able to switch between languages. Apart from these two perspectives, there is another kind of multilingualism that is known as receptive multilingualism, where the interlocutors speak in their native language to interact with each other. This occurs in regions such as Scandinavia, where speakers understand each other’s language. The definitions and considerations of proficiency and use help us understand the complex nature of multilingualism (Basseti & Cook, 2011; Baker, 2011; Zeevaert & Ten Thijs, 2007).

In the present research, the participants primarily speak Pashto as their first language, and have acquired Urdu out of necessity, as it is the national language of Pakistan. In their educational settings, instructors mostly use Urdu and English for communication, leading the participants to rely on their acquired Urdu and English skills to interact with teachers and, in some cases, classmates. Proficiency in English also offers advantages when seeking admissions in renowned institutions and during job interviews in Pakistan. According to Li’s (2008) definition, these participants can be considered multilingual as they have at least three languages in use within their academic, job, and educational context.

### **Cross-Linguistic Influence (CLI)**

Cross-linguistic influence (CLI), is a highly influential concept in the field of second language and third language acquisition. Researchers have suggested a number of labels to describe this process over the past few decades, including linguistic interference, native language influence, language mixing, and others. Sharwood Smith and Kellerman (1986) proposed the term CLI and added that this term is a more inclusive term than Language transfer because it also includes the phenomenon of L2 status, borrowing, and avoidance. However, CLI and language transfer are both



used to refer to a single phenomenon (Cross-Linguistic Influence is another word used for transfer) (Odlin & Yu, 2016).

The definition provided by Odlin for cross-linguistic influence is “The influence resulting from the similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired” (Odlin, 1989, p. 27). Jarvis supports Odlin’s definition and adds to it by saying that native language transfer occurs in places “where statistically significant correlation (or probability-based relation) is shown to exist between some features of learners’ Interlanguage (IL) performance and their L1 backgrounds” (2000, p. 252). Sharwood Smith and another researcher Kellerman in their work (1994) also defines CLI as, “The influence of any other language known to the learner on that target language” (p.198).

Language acquisition researches have also delved into the intricate workings of the human mind when multiple languages are involved. These studies aimed to better understand how language learners' minds processes, store, organize, and use linguistic information (De Angelis, 2007). The present advancements in theoretical frameworks like Rothman “typological proximity model”, have aimed to shed light on the phenomenon of language transfer, explaining how languages interact, activate, and inhibit each other within the brain. These models analyze how some languages are selectively activated over others and the interference that may result, becoming the main source of linguistic luck or language deficiencies in the generation of L3. The Cumulative Enhancement Model (Flynn, Foley, & Vinnitskaya, 2004) further highlights that previously acquired languages can facilitate, rather than hinder, subsequent language learning.

In existing literature on cross-linguistic influence various factors have been identified as influential constraints. Jarvis and Pavlenko (2008) have provided an extensive and well-structured analysis of the affective elements in CLI. They divided the established variables in the literature into five groups. Language and psycholinguistic elements are included in the first group. In this category the ways of determining the impact of previous languages on the acquisition of a new language is elements like recency, language similarity, and frequency. The second group contains developmental and some cognitive factors, that is to language consciousness and cognition related language abilities. The third group comprises factors associated with increasing language expertise and understanding, for instance age, duration of language experience, and language proficiency. The fourth group pertains to factors linked to the learning environment. Finally, the fifth group has factors associated with language use.

A lot of studies on cross linguistic influence have focused on the first group elements of Jarvis and Pavlenko classification (2008). Significant emphasis has been placed on linguistic and



psycholinguistic factors as the main constraints in CLI. These factors include elements like recency of language use, proficiency in the second language L2, and perceived language distance also known as Psychotypology. The current study primarily aims at perceived language distance or Psychotypology and its impact in the production of English, which serves as the third language (L3), by the individuals with Pashto as their first language (L1) and Urdu as their second language (L2).

### **Kellerman's Model of Cross linguistic influence**

All linguists are familiar with the issue of trying to transfer one's native language structure to a foreign language as a widespread phenomenon. From a psycholinguistic standpoint, Kellerman offered his model of cross-linguistic influence and placed the learner at the center of the decision-making process for transfer. The cognitive efforts of the learner—in the form of judgments, tactics, and decisions—play a significant, if not deciding, role in language learning, according to Kellerman. Accordingly, he claims that "three interrelated factors in the determination of language transfer: (1) Learner's Psychotypology; (2) Learner's Prototypicality; and (3) Learner's actual knowledge of L2" must all be taken into account.

### **Learner's Psychotypology**

The word "Psychotypology" was, in fact, first used in the ongoing discussion over the function of native language in SLA by Erick Kellerman in 1986. According to Ottinowska (2016, p. 103), it is described as "the learner's perception of typological distance between languages (...) which is the individual assessment of the degree of relationship between particular structures and works of L1 and L2." Psychotypology, then, is the perception of the learner of the distance between their L1 and L2, or the perceived proximity or distance between languages in terms of typology. Learner's typology plays a significant role in determining language transfer: The closer the proximity between L1 and L2, the higher the potential for successful transfer. "The learner may transfer if he thinks there might be a connection between Native Language (NL) and Target Language (TL) at a certain location (Kellerman, 1977, p. 93)."

On the other hand, if they do not see any similarities between the L1 and the target language, learners will not transfer (they will avoid transfer as a strategy).

Håkan Ringbom (1987) supports this claim by conducting studies on Finnish and Swedish native speakers learning English as a second language in Finland. His findings indicated that the native language, particularly during the initial stages of second language acquisition, can provide significant support if it is related to the target language.





Psychotypology typically results from a learner's metalinguistic knowledge of how similar or dissimilar specific linguistic structures of one language are to those of another. The foreign language effect (Meisel, 1983) or L2 factor (Williams & Hammarberg, 1998) has come to be defined as the phenomenon wherein students frequently perceive greater linguistic proximity between an L2 and L3. This is because when we learn a foreign language, we often acquire explicit knowledge about its grammar and rules through formal instructions. This explicit knowledge acts as a filter, making it difficult to access our first language (L1) while acquiring the third language, even if the L1 and L3 are similar in structure.

Additionally, as they learn more and become more aware of the distinctions between the two languages, learners regularly alter their Psychotypology. According to Gass, Behney, and Plonsky (2013), "it may be that a learner starts learning a language with the expectation of great similarity, only to find that there are more differences than originally anticipated."

More recent studies, such as Testa (2020), confirm that psychotypological perceptions continue to influence structural transfer in L3 learners across article systems and syntax.

### **Learner's Prototypicality**

The term prototypicality describes the learner's perception about how much prototypical (central, typical, universal) or aprototypical (noncentral, atypical, language-specific) a structure or meaning is. Kellerman conducted studies, such as the breken (Dutch verb means break) study, to determine the prototypicality of certain linguistic elements in relation to native speakers' judgments. Learners are more likely to transfer language-neutral-perceived items from their L1 to the L2 compared to language-specific-perceived ones.

An example of prototypicality can be observed in the word order of German where the word order of German is considered prototypical when compared to English, as German allows for two word orders (SVO in main clauses and SOV in subordinate clauses), whereas English consistently follows the SVO word order pattern.

### **Actual knowledge of the L2**

Kellerman hypothesized that learners' actual knowledge of the target language (L2) also influences language transfer. While it is challenging to directly assess learners' L1 knowledge, their L2 proficiency is often used as an indicator of their language knowledge. The level of L2 proficiency contributes to the determination of language transfer.

Rothman (2010, 2011, 2015) has recently brought back the concept of Psychotypology. He suggests the "Typological proximity model," which contends that the choice of the language from which the transfer takes place is significantly influenced by perceptions of similarity or distance across languages. In other words, how closely related the third language (L3) is perceived to



be to the first language (L1) or second language (L2) determines which language is more likely to influence the production of the L3. This paper aims to determine whether the first language (Pashto) or the second language (Urdu) is considered closer to English (L3) and which of these languages has a stronger influence on the production of English in the Pashtun multilingual learner of English.

## **RESEARCH METHODOLOGY**

### **Nature of research**

This study is descriptive in nature and includes both quantitative and qualitative data obtained through the use of questionnaire that includes both close and open-ended questions. The purpose was to describe Pashtun multilingual learners' perceptions of linguistic distance and language transfer among Pashto, Urdu, and English, without manipulating any variables.

### **Population and Sampling**

Utilizing convenience sampling technique, a sample of 60 English students from the Department of English (2019–2023 session) at the University of Malakand was selected for the study. The sample included both male and female students aged 22–25, all of whom were active English learners receiving instruction in English.

### **The Questionnaire**

An online questionnaire adapted from Athmani and Boukhedimi (2021) study was used for data collection. The questionnaire was chosen for data collection as a tool keeping in view the nature of the topic which required self-reported proficiency, usage and perceptions data about the three languages from the participants. It contained both open-ended and some close-ended items. The questions were focused on finding out the participant's language background, proficiency, exposure and perceived linguistic distance between Pashto, Urdu, and English.

### **Data Collection Procedure**

The online platform Google Forms was used to circulate the questionnaire.

### **Data Analysis**

Descriptive statistics (frequencies and percentages) methodology was used to analyze quantitative data such as multiple choices and Rating scale items to find out proficiency, language use and perceived similarity patterns. Thematic analysis was employed for analyzing qualitative responses from open-ended items to gain deeper understanding of the participants' perceived language similarities and difference.

## **RESULTS**

This section provides a detailed summary of the data collected for determining the role of psychotypology in cross-linguistic influence among Pashtun Multilingual learners of English. The primary aims of the research were to find out; the individuals perception of the linguistic distance





between the three languages Pashto (L1), Urdu (L2) and English (L3), the language which is considered closer to English and hence may become the potential source of transfer. As mentioned earlier in the methodology, a mixed approach was used for data collection. Descriptive statistics was used for the analysis of quantitative data and qualitative data was analyzed through thematic analysis to gain deeper understanding of the participants' perceived language similarities and difference.

### Demographic and Language Background

The participants were undergraduate students of the department of English at University of Malakand. All of them were aged between 21 and 25, comprising of 36 boys and 24 girls. Pashto, especially, the North-Eastern variety of Pashto was the native language of all the participants. All of the participants identified themselves as multilingual knowing Pashto (L1), Urdu (L2) and English (L3).

### Language Proficiency

Participants were asked to rate their language proficiency on a scale of 1 to 5, where 1 represents Novice and 5 Distinguished (Using the ACTFL (American Council on the Teaching of Foreign Languages) levels) . The results are illustrated in the following tables.

**Table 1 Self-Rated Proficiency in Pashto (L1) (N=60)**

Proficiency Level	Frequency	Percent	Cumulative Percent
1 (Novice)	0	00.0	00.0
2 (Intermediate)	0	00.0	00.0
3 (Advanced)	0	00.0	00.0
4 (Superior)	12	20.0	20.0
5 ( Distinguished)	48	80.0	100.0
Total	60	100.0	

As demonstrated in the table all the participants rated themselves either Superior or Distinguished, showing their mastery of the Pashto language (their mother tongue). Despite Pashto being their native language, the reason behind choosing Superior proficiency by some participants may be rooted in the lack of Pashto grammar knowledge, which is a common committed mistake due to conflating proficiency with explicit metalinguistic knowledge.

**Table 2 Self-Rated Proficiency in Urdu (L2) (N=60)**

Proficiency Level	Frequency	Percent	Cumulative Percent
1(Novice)	0	00.0	0.00
2 (Intermediate)	6	10.0	10.0
3 (Advanced)	12	20.0	30.0



4 (Superior)	42	70.0	100.0
5 (Distinguished)	0	0.00	100.0
Total	60	100.0	

The proficiency in Urdu is also very high. Most of the participants have rated themselves as Superior in Urdu. This is most likely due to the high exposure of participants to Urdu in their schools, social media and correspondences.

**Table 3 Self-Rated Proficiency in English (L3) (N=60)**

Proficiency Level	Frequency	Percent	Cumulative Percent
1 (Novice)	9	15.0	15.0
2 (Intermediate)	6	10.0	25.0
3 (Advanced)	33	55.0	80.0
4 (Superior)	12	20.0	100.0
5 (Distinguished)	0	0.0	100.0
Total	60	100.0	

The proficiency in English is varied for all the participants but most of them rated themselves as Advanced in English. This is normal for the current participants because English is used only in formal education for these students at academic institution, especially universities.

### 3. Language Use and Exposure

**Table 4 Language Use in Different Contexts (N=60)**

Context	Pashto	Urdu	English	Mixed
1.Communication with Family/Close Friends	45 (75%)	0 (0%)	0 (0%)	15 (25%)
2. Reading Books, Newspapers, Online Articles	0 (0%)	9 (15%)	51 (85%)	0 (0%)
3. Expressing Emotions/Feelings	54 (90%)	0 (0%)	3 (5%)	3 (5%)
4. Watching Movies, TV Shows, Listening to Music	3 (5%)	24 (40%)	18 (30%)	15 (25%)
5. Social Media/Online Interactions	6 (10%)	9 (15%)	30 (50%)	15 (25%)



This table clearly shows the exposure to and use of languages in different contexts. While English is the most dominant language in academic and informational contexts, Pashto is marked higher in intimate and emotional situations. Urdu on the other hand is mostly used for entertainment purposes. Some participants have also chosen flexible code-mixing in these varied activities.

### Languages Perceived as Closer to English

**Table 5 Perceived Linguistic Closeness English (N=60)**

Perceived Closer Language	Frequency	Percent	Cumulative Percent
Urdu	30	50.0	50.0
Pashto	6	10.0	60.0
Both	18	30.0	90.0
None	6	10.0	100.0
Total	60	100.0	

This and the subsequent table 6 illustrate the most important data in this research. This table is about the perceived closeness of the background languages that is Pashto (L1) and Urdu (L2) to the target language English (L3). As shown in the table, half of the overall participants have chosen Urdu is closer to English as compared to Pashto, which is considered closer to English only by 10% of the participants. Surprisingly, a significant portion of the participants have responded with both of the two languages being closer to English. The last 10% of the participants have opted for none of the languages being closer to English, which indicates their metalinguistic awareness. The reasons for these choices are given in the open-ended overall similarities and differences question.

### Perceived Closeness by Linguistic Components

For detailed understanding of the psychotypology of the participants, they were asked to rate the closeness of Pashto and Urdu to English across the four linguistics aspects namely grammar, phonetics, vocabulary and morphology.

**Table 6 Perceived Closeness to English by Linguistic Sub-Component (N=60)**

Linguistic Component	Pashto	Urdu	Both/Neutral
1. Grammar	12 (20.0%)	30 (50.0%)	18 (30.0%)
2. Phonetics	30 (50.0%)	9 (15.0%)	21 (35.0%)
3. Vocabulary	21 (35.0%)	27 (45.0%)	12 (20.0%)
4. Morphology	24 (40.0%)	27 (45.0%)	9 (15.0%)



A split perception is observed in responses related to perceived closeness by linguistic sub-components. Urdu is predominantly considered closer to English by almost half of the participants in aspects such as Grammar, Vocabulary, and Morphology, while phonetics is the only component where Pashto is marked as closer to English by the same majority. Both languages being closer to English in all the aspects is also observed in minority.

### Qualitative Description of Similarities and Differences

For a deeper understanding of learner's psychotypology some open-ended questions like the following were asked:

*"In your own words, how would you describe the overall similarities and differences between English, Pashto and Urdu in terms of phonetics/phonology, grammar, vocabulary, and morphology?"*

There were various responses to the open-ended question regarding the overall similarities and difference among Pashto, Urdu and English. Although there was no consensus on a single language being closer to English, still two major perspectives emerged from the responses. One group of the participants chose Pashto being closer to English and supported this claim by providing three reasons: Pashto and English have grammatical parallels, Pashto has harsh phonetic qualities like English and both the languages have similar morphological processes like compounding. The other group of the participants responded with Urdu being closer to English. The reasons given for this perception were: both the languages having some shared vocabulary in the form of loanwords and Urdu being a medium of instruction for teaching English grammar, which makes the structure of Urdu appear more familiar and closer to English. Apart from the disagreement above, the participants generally agreed on the closeness of Pashto and Urdu, citing mostly the same 'SOV' sentence structure of Pashto and Urdu, which is different from the 'SVO' sentence structure of English. Overall, the perceptions of the participants were distributed, while some connecting Pashto with English on grammatical grounds and others linking Urdu with English in lexical similarities and educational connections.

### Source Language of Transfer in English Production

The last section of the questionnaire was about determining which of the participants' background language i.e. Urdu or Pashto, is the source language of transfer during the comprehension and production of the target language, English.

### Language Used in Thinking and Writing

The findings demonstrate a dual reliance and hence a complicated transfer mechanism.

**Table 7 Language of Reliance and Conceptualization in the Production of English (N=60)**

Question	Pashto	Urdu	Both/Neutral
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1. Language relied upon during writing	24 (40.0%)	33 (55.0%)	3 (5.0%)
2. Language used for brainstorming in the writing process	45 (75.0%)	15 (25.0%)	0 (0.0%)
3. Language used for explaining a new encountered word	33 (55.0%)	24 (40.0%)	3 (5.0%)

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Most of the participants (75%) responded that they think in Pashto when brainstorming ideas for writing in English. Surprisingly when asked on which language they rely on when writing in English, a big percentage of the students (55%) reported Urdu. This dual reliance indicates that the conceptualization process begins in Pashto (L1) and the learner relies on Urdu (L2) in formatting and producing text in L3 (English). Pashto was preferred by most of the participants (33) to explain the meaning of a new word encountered in English, which is an indicator that Pashto is the language mainly used for deep-level comprehension.

#### **Qualitative Insight on Vocabulary Gap and Influence**

The responses related to how the participants fill in a vocabulary gap when producing English were diverse; the majority of the participants (65%) stated that they use both Pashto and Urdu in these situations. After this mixed approach, Urdu was the second most predominant language to which the participants code-switch while filling a vocabulary gap and it is confirmed from the response of one of the participants when he said, “I take most words from Urdu”. This validates the finding that learners tend to resort to Urdu while mediating lexical retrieval.

Lastly, when questioned about which language they believed exerted more influence on their English:

- Pashto: 45% (n=27)
- Urdu: 15% (n=9)
- Both: 30% (n=18)
- None 10% (n=6 )

Whereas the participants view Urdu as the typologically closer language in structure to English, the responses regarding which language has the greater impact on English are varied. Most of the participants have responded with Pashto or Both languages greatly influencing the English Language. In the remaining participants some have reported Urdu, while a small minority stated that none of the two languages have an impact on English. This further confirms the phenomenon of dual transfer, where the Pashto language act as a knowledge base and a center of ideation and Urdu is used as a strategic scaffold for word choice and formatting when producing English (L3).



## Discussion

The present study aimed to investigate the role of Psychotypology in Cross-Linguistic Influence (CLI) among Pashtun multilingual learners of English (L3), specifically by identifying their perceived linguistic distance between L1 Pashto, L2 Urdu, and L3 English, and determining the source language of transfer. The findings reveal a complex, non-unitary psychotypological orientation that influences the transfer mechanism.

### The Dual Nature of Psychotypological Closeness

The first research objective aimed at identifying the perceived linguistic distance by Pashtun Multilingual learners between their L1, L2 and L3. The findings suggest a divided perception regarding which languages is closer to English. When questioned in general, half of the respondents viewed Urdu as a relatively closer language to English and only 10% preferred Pashto. This general view coincides with the idea of the L2 Factor or Foreign Language Effect (Williams and Hammarberg, 1998) in which the L2 (Urdu) is commonly used as a psychological mediator between L1 and L3. As Urdu is the national language of Pakistan and most of the prospective students in most Pakistani educational institutions are taught English formally in Urdu, the students have a clear and conscious understanding of the structure of the Urdu language that they can overlay onto English, making Urdu *feel* more accessible and similar for instructional purposes.

But on a deeper study regarding the linguistics sub-components, it was revealed that this perception of closeness is domain-specific. Grammar, Vocabulary and Morphology were the main domains where Urdu was rated as closer to English by 50%, 45% and 45% respectively. It is possible to explain this perception by a number of factors. Firstly, Urdu has borrowed many historical Elements from English (Kalsoom et al, 2019), which forms perceived lexical closeness. Additionally, Urdu serves as a way to bridge the vocabulary gap and grammatical concepts taught in educational environment.

On the other hand, Pashto (L1) was found to be more related to English in Phonetics (50%). This result is noteworthy as it indicates that though formal education and structural similarity have the tendency to move learners towards Urdu as a structural bridge, the deep L1 background gives a more natural or familiar phonetic base, perhaps the subtle, objectively present typological characteristics or simply a more comfortable articulatory base.

These findings suggest a complex, non-monolithic psychotypical view of psychotypology, proving the point by Kellerman, (1986) that transfer is subjective, which in a multilingual setting can vary across the linguistic planes.





### The Mechanism of Dual-Source Transfer

The third objective of the research i.e. finding out the source language of transfer resulted in the most crucial finding of the research that is a Dual Transfer Mechanism during the production of L3 (English). The data reveals a clear evidence of the underlining role of Pashto in conceptualization and ideation. A large majority (75%) of the participants stated that they think in Pashto when developing ideas in English. Moreover, a substantial percentage (55%) of the participants favored Pashto for describing a new word encountered in English as well. This is an indication that despite the perceived typological gap between Pashto and English, Pashto serves as the primary cognitive base for deep level comprehension and initial scaffolding of thought, before starting the actual writing process.

Conversely, it is heavily suggested by the statistics that Urdu (L2) maintains its status as the strategic structural and lexical bridge. After the conceptual framework has been laid out by Pashto, the conscious perception that Urdu is closer to English in grammar and morphology leads the learner to use Urdu during the *production* and *structuring* stage of L3 production. This is substantiated by the fact that when the participants were requested to state which language they use to rely on during the writing process, the percentage of Pashto fell down from 75% to 40%, with a high majority choosing Urdu (55%) for the same question. This dual perception suggest that the source language of transfer is not dependent upon the overall closeness of a single language to English but rather on which language provides the most beneficial linguistic features (its typological proximity in a specific domain, as suggested by Rothman's model) i.e. L1 for meaning and L2 form. De Bot (2015) has also that multilingual systems operate dynamically, multiple language activating simultaneously during production.

This dual mechanism highlights the important strategic role of cross-linguistic influence in tertiary language acquisition (L3), where the learner make use of both the background languages L1 and L2 for cognitive depth and structural proximity to guide himself/herself through the target language production.

### Conclusion

This research study makes use of Kellerman's concept of Psychotypology (1986) to determine the individual perception of Pashtun Multilingual learners about the linguistic distance between their background languages Pashto (L1), Urdu (L2) and the target language (L3). Furthermore, it attempts to find out which of the two background languages are considered closer to English and which one is the potential source language of transfer in the production of L3 English. The results highlight the fact



that when an individual is exposed to multiple languages the notion of linguistic distance becomes not just a simple act of choosing either L1 or L2, but a dynamic domain-specific process that dictates the strategic selection of the source language when producing L3.

### **Theoretical and Pedagogical Implications**

In theory, this study contributes greatly in that it goes beyond simple L1-to-L3 or L2-to-L3 model of influence. The Dual Transfer Mechanism is a new contribution to the understanding of complex cognitive mechanism involved in multiple language acquisition, especially Third Language acquisition that is the refined source management employed by the learner.

These findings are very pedagogically relevant in the English language teaching to Pashtun students:

1. **Focused Grammatical Teaching:** Urdu being seen as the grammatical and morphological intermediate, teachers can intelligently apply Urdu-English comparisons to directly teach challenging grammatical ideas, and making use of the perceived closeness of the learners between the both languages.
2. **Ideation:** It is important to understand that L1 (Pashto) is the cognitive foundation of ideation, so when passing on the lesson, teachers ought to motivate brainstorming and in-depth process using L1 to be followed by structural assembly in L2 or L3. This justifies and capitalizes on the L1's role in scaffolding complex thoughts.
3. **Phonetic Transfer:** The phonetic similarity of Pashto and English as perceived should be further investigated since it might be a facilitator or inhibitor of acquisition of an accent. The instruction can be tailored to take advantage of shared phonemes, and to reduce the effect of possible negative transfer.

### **Limitations and Future Research**

The small, localized sample size (n=60) used in this study and the use of self-reported data as gathered through a questionnaire limits the generality of this study. Although the mixed-methods approach was helpful in offering subjective insights into psychotypology, it lacked authentic and real-time language production data.

This study's generalizability is limited by its relatively small, localized sample size (n=60) and its reliance on self-reported data collected via questionnaire. While the mixed-methods approach provided valuable subjective insights into psychotypology, it did not capture authentic, real-time language production data.

These limitations should be overcome in future research which should:

1. Use large and more varied population in various levels of proficiency.



2. Employ English language manipulation tasks such as translation, narrative recall, or think-aloud protocols to directly witness and measure the dual Transfer Mechanism at work.

Finally, this study gives valid arguments that Psychotypology is an elaborate filtering system, which helps Pashtun multilingual learners to strategically use the most beneficial linguistic attributes of both Pashto and Urdu to strategically negotiate the challenging environment of L3 English acquisition.

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