



INVESTIGATING THETA ROLE IN THE SINDHI LANGUAGE: IMPLICATION FOR CROSS LINGUISTICS STUDENTS

Syeda Nira Fatima

Research Scholar, English Linguistics, Lahore Leads University, Punjab, Pakistan.

Email: nira.h.i38@gmail.com

Dr Perveen Akhter Farhat

Assistant Professor, Department of English, Lahore Leads University, Lahore.

Email: drparveen.eng@leads.edu.pk

Azhar Ahmad

Research Scholar, English Linguistics, Lahore Leads University, Punjab, Pakistan.

Email: azharscholar313@gmail.com

ABSTRACT

This paper examines theta role assignment in Sindhi in a generative-lexical semantic framework and the consequences that this assignment could have on non-native learners of multilingual Pakistani settings. The study examines the projection of Sindhi Agreement, Case, and postpositional marking of verbs as core roles, including Agent, Theme, Experiencer, Goal, Source, Instrument, Beneficiary and Causer, as opposed to binding word order. Based on the qualitative descriptive and analytical framework, real-like Sindhi sentences were analyzed and data were elicited using 20-30 nonnative university students in terms of translation, sentence-completion tasks, picture-description tasks and questionnaires. The discussion indicates that, although Sindhi theta grids are regular, there are flexible SOV/OSV patterns, dative Experiencers, causative hierarchies, and passive constructions, which present enduring interpretive problem of the learners, and give rise to repetitive errors, including dative omission, Experiencer-Agent confusion and misplacement of Theme, Goal and Instrument roles. These error patterns are closely associated with L1-based assumptions (particularly, English and Urdu), excessive use of linear position and insufficient awareness of the semantic functions of the major postposition such as لاء, سان, کي, and پاران. The results generalize theta-theoretic and lexical-semantic explanations to an Indo-Aryan language which is under documented and empirically relate the properties of formal argument-structure with actual performance of learners. It is based on this that the study suggests a linguistically based pedagogical framework that combines explicit teaching of theta-role instruction, postposition practice, contrastive Sindhi-English exercises, visual mapping of verb-argument relationships, and error based learning to positively influence the learning of more native learners to speak Sindhi.

Keywords:

Sindhi; theta roles; argument structure; Government and Binding Theory; Experiencer; dative case; second language acquisition; non-native learners; postpositions; pedagogical framework.

Background of the Study

Language is an organized means by which human beings encode, have social functions as well as representing their mental knowledge of the world. The study of linguistics aims at revealing the principles that underlie the organization of language and meaning in the systematic transmission of enshrined meanings on grammatical structure. A major issue of the modern linguistic theory is the interaction of syntax and semantics, especially how sentence structure and meaning relate with each other. In this interface the notion of theta roles (or thematic roles) plays a vital role in that it describes the manner in which the participants of an event are semantically connected to the verb or predicate of a clause.

Theta role is a product of Generative Grammar, particularly of Government and Binding Theory (GB Theory) by Noam Chomsky. In this framework, verbs are considered to be the most important parts of the construction of the clause since they are capable of governing the number of arguments that can take place in any sentence and the nature as well. The arguments have a designated semantic role, termed a theta role that determines the role they

play in the described event by the verb. Theta roles that have been described as common are the Agent (the initiator of an action), Theme (the person or thing that is acted upon by the action), Experiencer (the person that experiences a psychological state) and Goal, Source, Instrument and Beneficiary. These positions aid in understanding the reason why various noun phrases act differently with regards to the same verb.

One of the basic rules that are applied to theta roles is the Theta Criterion, which asserts that each argument should be assigned a theta role, and each theta role should be assigned to an argument. This principle provides a clear and systematic syntactic position-semantic interpretation mapping. As an illustration of this, in a simple transitive construction like the child broke the glass, the subject child usually takes the role of the Agent whereas the object glass takes the role of the Theme. Nevertheless, it is not always a simple mapping. A non-agentive role can be assigned to the surface subject in passive constructions, un-accusative verbs, or psychological predicates, which proves that semantic interpretation cannot be carried out only through syntactic position. With the development of the linguistic theory, the theta roles treatment has been optimized in the views of Minimalist Program, lexical semantics, and argument structure theories. According to these approaches, theta roles have a close connection with the lexical aspects of verbs and conceptual frame of events. Instead of being considered as fixed syntactic labels, theta roles are now conceptualized as being a part of a bigger system which links meaning, cognition and grammatical form. This view brings out the human cognitive system in coordinating the participants of the event, and it puts forward the stand that the language building is a result of interplay among the lexical meaning, universal grammatical laws and cognitive constraints.

Statement of the Problem

“The problem statement is a clear and concise summary of the research problem, typically contained within one paragraph, its function is to identify the concerned issue” (Ahmad, Farhat & Abbas, 2024, p, 300). The theta roles can be central in elaboration of how meaning is organized in the sentences and the way verbs can construct semantic relations between them and their arguments. Although this idea has already been studied in those languages that are well documented like English, the research on theta role assignment in Sindhi language has a serious deficit of systematic and theory-based research. A bulk of the current research on Sindhi grammar is surface descriptions of morphology and syntax, which provide little information about syntax-semantics interface and importance of argument structure in the construction of meaning. This is a research gap that poses great challenges to non-native learners of Sindhi that frequently use the grammatical patterns of their first languages in the process of interpreting Sindhi sentences. Semantic roles (Agent, Theme and Experiencer) are often misunderstood by the learners as a result of the variation in case marking, word arrangements and the composition of experiences. Further, the existing Sindhi language teaching texts are silent on theta roles, and learners have no explicit conceptual structure to learn the meaning of a sentence. Consequently, the research issue in the present study is two-fold: the lack of a thorough linguistic study of theta roles in Sindhi and the lack of pedagogically-based paradigms to support the learning of non-native speakers. The solution of this issue is crucial to further theoretical research of Sindhi syntax and semantics and enhance the effectiveness of teaching the Sindhi language to non-native speakers.

Objectives of the Study

- To describe the types of theta roles in Sindhi sentence structures.
- To analyze how theta roles are assigned by Sindhi verbs within a linguistic framework.

Research Questions

1. What types of theta roles are found in Sindhi sentence structures?
2. How are theta roles assigned to arguments in Sindhi clauses?

Significance of the Study

The research is both theoretically and pedagogically important. Theoretically, it has led to the research of linguistics by offering a systematic study of the theta assignment of roles in the Sindhi language, a field that has not been widely addressed in the context of formal syntactic and semantic models. It is anticipated that the findings will enhance cross-linguistic investigations and expand the current theories of argument structure by adding the data concerning a poorly studied Indo-Aryan language. Pedagogically, the study has practical implications on the non-native Sindhi learners of other languages as well as the language teachers. The study can help to construct more effective teaching strategies and enhance better learning outcomes by pinpointing typical problems of learners and providing a linguistics-oriented framework of theta role comprehension. The results can also be used by curriculum developers and instructors who develop instructional materials to be more explicit about the semantic organization of Sindhi.

Literature Review

A literature review is a critical analysis and synthesis of scholarly sources on a specific topic. It is not just a summary of what you have read, but an evaluation that establishes the current state of knowledge, identifies research gaps, and provides a foundation for your own research (Ahmad, Cheema & Farhat, 2023; Ansari et al., 2025; Yousaf et al., 2025). This part aims to conduct a review of literature on the theta roles, theoretical basis and cross-linguistic instantiation with an emphasis on its implication in second-language learning. The review starts with the theoretical frames which describe theta role assignment as Government and Binding Theory, lexical semantics, and Minimalist views. It then looks at common theta roles, how they are realized in different languages and similarities and differences between languages. Last, it puts the Sindhi language in this larger context, with some gaps in the literature and the necessity to have a learner-centered framework in place.

1. Theoretical Foundation

A theoretical foundation (often used interchangeably with a theoretical framework) is a set of established theories and concepts that provide the underlying structure and support for a research study (Arooj et al., 2025; Ali et al., 2025; Ahmad et al., 2026; Rashid et al., 2026). It serves as the intellectual cornerstone, allowing researchers to ground their investigations in recognized academic principles rather than relying solely on personal observation. The Theta Theory is presented as the systematic explanation of the correlation between verbs and their arguments in the Government and Binding framework offered by Chomsky. The GB Theory states that in a sentence every verb indicates a number of arguments which have to appear in it, and every argument has a theta role, which represents its semantic role. This theory states that sentence structure is not only a syntactic affair but also carries a semantic content in terms of mapping arguments to semantic positions. The theta functions are thus a transitional linkage between the syntactic and the syntactic roles of the verbs and the arguments respectively.

2. Minimalist Views of Theta Roles

The Minimalist Program is an extension of the GB Theory, in which the principles are simplified, and the very idea of theta role assignment remains. Minimalist theories lay stress on economy and universality of syntax, which implies that theta roles are properties that lead to the projection of arguments and their locations in the sentence structure. Theta roles are however important in this scheme to associate meaning with form, and the processes of how this assignment is to be done are studied in relation to feature-checking, movement, and interface-conditions between syntax and semantics.

3. Types of Theta Roles

The theta roles give an indication of a semantic relationship between a verb and its arguments. The commonest roles examined are:

- **Agent:** Who did/initiated an action (e.g., Ali opened the door).

- **Theme:** The thing that is acted upon or changed by the action (e.g. the door in the sentence above).
- **Experiencer:** The participant who is a perceiver or experiencer of a psychological state (e.g., Ali felt happy).
- **Goal:** The destination or recipient of an action (e.g., He gave the book to Sara).
- **Source:** In what way does something move or come (e.g., He took the book off the shelf).
- **Instrument:** The method of how something is done (e.g. She cut the paper with scissors).
- **Beneficiary:** The (e.g., He baked a cake to his friend) is the participant whose benefit the action is done.

They are important to comprehend syntactic-semantic interfaces and use these roles to analyze the meaning of sentences and argument assignment across languages.

2. Theta Roles in English and Indo-Aryan Languages.

Word order and, to a smaller degree, prepositions usually indicate the theta roles in English language. As an illustration, the subject position can be the Agent, whereas the object position is the Theme. English has comparatively stable Subject-Verb-Object (SVO) order, violations of which may lead to either interpretation distortion or grammatical violation.

Indo-Aryan languages, such as Hindi, Urdu and Sindhi, have more morphological marking of arguments using postpositions and case markers. As an example, the dative constructions can put the Experiencer role on the subject, such as Hindi **मुझे ठंड लग रही है** (Mujhe thand lag rahi hai - I feel cold). The word order is also more frequently flexible, and theta roles are also often defined by morphology and not by syntactic location only as in English.

Theta roles like Agent, Theme and Experiencer are relatively universal across languages, however their syntactic expression varies. English is based on the word order whereas Indo-Aryan languages depend on case marking and postpositions. These cross-linguistic patterns are essential in the analysis of theta roles in Sindhi as well as in solving the challenges encountered by non-native learners, who are forced to do away with differences in semantic role assignment between the L1 and Sindhi.

3. Prolonged Introduction of Sindhi Grammar.

A good example of a polymorphemic language is Sindhi, which has complex and compound word structures and an elaborate morphological system. It has morphology comprising of derivational and inflectional processes whereby words can be created and altered in a variety of ways. Sindhi morphological constructions have the techniques of addition, subtraction, and replacement of morphs, which are factors that make the language flexible and expressive. The other notable characteristic of Sindhi morphology is reduplication that comes in partial and complete forms as well and is usually employed to express an emphasis, intensity, continuity, or distributive meaning. Sindhi Inflectional morphology covers a central part of the grammar structure especially in the creation of nouns. The inflection of Sindhi nouns is based upon the number, gender and case inflection and these inflexions are systematic. These rules can be formalized to aid language processing tasks, and they can be done computationally. Rahman (2009) gives an extensive discussion of these cases of noun inflection and gives them importance to computational modelling and linguistic analysis. Expounding more on this complexity, Rahman and Bhatti (2010) explain that Sindhi is a morphologically rich language where morphological construction comprises inflection as well as derivation. The language has primary and secondary type of words which are further divided into simple, complex, and compound words. This stratification contributes to the complexity of the Sindhi morphology as well as complexity in its analysis. The number, gender, and case are marked in Sindhi nouns especially and the attributes render them an ideal choice in computational modeling with finite

state transducers (FSTs). FSTs offer a powerful system of conveying and executing Sindhi noun inflection rules in the natural language processing systems.

Research Gap

A research gap is simply an unanswered question or an unexplored area in a particular field of study. It's the "missing piece of the puzzle" where existing research hasn't yet provided a clear answer, leaving room for a new study to contribute something fresh (Hussain et al., 2023; Arshad et al., 2025; Riaz et al., 2026). Although there is a significant amount of literature on theta roles in the context of generative grammar, lexical semantics, and the Minimalist Program, most studies on theta roles focus on the ubiquitous well-documented languages like English, German, and Japanese, and relatively little is done concerning South Asian languages, as well as low-resource languages. Research available in Indo Aryan languages is biased, with the most targeting Hindi and Urdu, and Sindhi seems to be left out in most serious debates of syntax semantics interface and argument structure. The current accounts of Sindhi grammar are mostly of a traditional and descriptive nature and focus on phonology, morphology, and simple classification of sentences but not theory-based analyses of predicate argument structure and theta role assignment. Even computational and corpus based studies on Sindhi, though emphasizing on its rich morphology and complex word formation, do not offer a fine mapping of how verbs assign roles like Agent, Theme, Experiencer, Goal, Source and Instrument within a modern theoretical framework. Consequently, no one covers a full description of Sindhi theta grids in various types of clauses such as dative, causative, passive and experience based constructions. In terms of a second language acquisition, the semantic role literature is largely concerned with how students learn interpretive contrasts and semantic features in languages such as English and this again is usually done using experimental or corpus based studies, however, there is no research on how students acquire theta role assignment in Sindhi in particular. Literature that records Sindhi as a second or second language is very limited and even so that which is available does not systematically correlate the problems of the learners with formal characteristics of theta role realizations e.g., postposition marking, flexible SOV word order and multi argument structures. As a result, such problem areas identified during the current work, as the dative marked Experiencers, Causer - Agent distinctions between the causatives, and interaction of Instrument and Goal with Theme, are not well covered by previous SLA studies. In addition, the existing Sindhi textbooks on teaching nonnative speakers are primarily devoted to the vocabulary, simple syntax and the memorization of sentence structures, without much or any direct coverage of theta roles or semantic sense making regarding the composition of the argument. There is a significant lack of pedagogical models that combine formal theta role analysis with the classroom practice, e.g. using role labelled examples, contraposition of Sindhi-English tasks, or error based exercises, which address common errors in assigning the Agent, Theme, Experiencer, Instrument, and Goal. This pedagogical disconnect is especially severe when the multilingual situation is involved and learners transpose the expectations of such languages as English or Urdu and are deprived of conceptual resources to make sense of post positioned role marking of Sindhi.

Research Methodology

"The methodical study of the procedure is called the research methodology" (Ahmad, Shahid & Farhat, 2023). Research methodology is the systematic, theoretical framework used to guide a study and ensure its results are valid and reliable. It acts as a "blueprint" for research, explaining not just the specific tools used, but the overall logic and justification behind why those choices were made to answer a research question (Zainab et al., 2020; Khan et al., 2023; Farhat & Niazi, 2024; Fatima et al., 2025; Ullah, Farhat & Asim, 2025).

Research Design

"Design of the research comprises of the whole procedure which is conducted research" (Ahmad, Farhat & Choudhary, 2022, p, 524). The current study will use a qualitative

descriptive and analytical research design that suits the study of the complicated phenomenon of theta role assignment in Sindhi language. A qualitative design would enable the researchers to explore the syntactic and semantic levels of Sindhi sentences besides noting how non-native learners learn and decode these roles. The descriptive aspect of the study will guarantee a sensitive description of theta role patterns in the natural Sindhi sentences, and the analytical aspect will give a systematic interpretation of the patterns in connection with the language theory and language acquisition principles (Sherazi et al., 2025). It is the qualitative research that is particularly appropriate due to its focus on context and meaning-making, which is very important when studying how the learners assign and interpret theta roles in a non-mother tongue language. This research study is descriptive and thus, it will capture the actual usage patterns, sentence structures, and semantic relationships in Sindhi. In addition, the analytical part allows conducting a contrastive study of Sindhi and English, indicating problem areas in learning and possible references to crosslinguistic interference.

This design is parallel to the previous linguistic research regarding the structure of the argument and the semantic roles which have traditionally been based on the analysis of sentences and case studies to reveal the patterns that cannot be easily measured quantitatively. An example is the Government and Binding Theory of Chomsky (1981) focusing on the correlation between the verbs and the arguments in them, which involves a complex qualitative analysis of the sentence structures. Likewise, the qualitative methods tend to be employed in the studies about the second language acquisition to investigate the errors made by learners, the effects of transfer, and the way the learner processes grammatical roles, which further explains the chosen design. Altogether, both qualitative descriptive and analytical design are flexible, deep, and theoretically strong to tackle the research objectives and respond to the research questions of the study. It allows the researcher to discuss not only the linguistic complexity of the Sindhi language but also to discuss the pedagogical issues of non-native learners and thus bridge the gap between linguistic theory and the teaching of language.

Population and Sample

This study population comprises of non-native learners of Sindh who are already in the higher education institutions in Pakistan. Such learners are the target group to which a theta role based pedagogical framework would be the most useful. The non-native learners are especially of interest to this study as they tend to encounter problems with getting the structure of argumentation and roles of the semantic functions, which may hinder not only the process of comprehension but also the creation of correct Sindhi sentences. In order to provide a manageable and efficient process of data collection, the study will utilize purposive sampling as a non-probability method of sampling which is widely applied in qualitative research. The method enables the researcher to sample participants who have the particular characteristics of the research. In this study, the participants will be required to possess:

1. Minimal expertise in Sindhi (at least to assemble simple and complex sentences),
2. Indirectly through formal Sindhi teaching, and
3. The readiness to engage in linguistic activities and give introspective feedback on their perception of theta roles.

There will be 20-30 participants in the sample as it is sufficient to conduct a qualitative study that is focused on depth rather than breadth. Such a size guarantees that the collected data is detailed enough to detect the recurring patterns, analyze errors made by learners, and work out a pedagogical framework, and it is not too much information to transcribe and categorize sentences in a detail. Also, this sample size is consistent with other similar studies on second language acquisition and semantic role acquisition, which have 20 to 30 participants to get a reasonable insight into learner behavior without significantly affecting the quality of their analysis. The participants are also chosen with a wide scope of academic backgrounds, and this proves beneficial in that different learning experiences and cognitive strategies are also

captured in the study, and this attribute increases the generalizability of study results to other learners who are not native speakers.

Research Instruments

The research makes use of several devices to obtain extensive information on native Sindhi sentence constructions as well as the data created by the learners. Triangulation is effective as the findings are obtained using various instruments and increases both the validity and reliability of the results. The instruments include:

1. Checklist analysis of sentencings:

It is a tool created with a purpose of identifying and classifying theta roles in natural Sindhi sentences. Every sentence will be analyzed in terms of predicate argument structure, semantic role of every argument, and syntactic realization. Categories that will be applied in the checklist will be Agent, Theme, Experiencer, Goal, Source, Instrument, and Beneficiary, which may be analyzed and compared. This tool makes sure that information is analyzed consistently and objectively.

2. Elicitation Tasks:

The structured activities will be created to provoke the learner-produced sentences in Sindhi. Activities will consist of sentence completion, English-Sindhi translation, picture description, role assignment activities. The tasks are supposed to show how the learners will give theta roles in real time production of language and to determine common mistakes or misinterpretations.

3. Learner Questionnaire:

The qualitative data will be collected in the form of a semi-structured questionnaire that will help learners understand their perception of Sindhi theta roles, its strategies, and challenges. The questionnaire will contain closed questions (e.g., rating confidence in role assignment) and open-ended questions (e.g., describing certain problems about creating a sentence). This tool gives more contextual and introspective information to supplement the sentence analysis.

Data Collection Procedures

A stepwise process will be applied to the collection of data so that all materials will be handled systematically and ethically:

1. Gathering of Authentic Sindhi Sentences:

Sentences will be gathered on Sindhi textbook, newspapers, literary written texts, and oral speech of the native speakers. These will be used as a reference in the proper assignment of theta roles and the foundation of the contrastive analysis with data obtained by learners.

2. Elicitation of Data by Learners:

The participants will be interviewed by administration of structured activities that will evoke Sindhi sentences. Activities will involve translation activities, sentence completion and picture description activities. Such exercises will enable the researcher to be involved in naturalistic theta role assignment and also be able to identify general areas of difficulty.

3. Transcription and Categorization:

Every sentence (original and written by a learner) will be transcribed correctly, with the marks of verb forms, sequence of arguments, case marking, and semantic functions. The categorization of the sentences will be based on theta roles and the syntactic structures and will enable systematic comparison of the sentence with participants and types of the sentences.

4. Documentation and Organization:

Electronic and print data storage will be used and every participant will be allocated a distinct identifier that will ensure confidentiality. This organization makes retrieval easy in the analysis and also makes the findings traceable. These procedures make the study accurate, reliable, and replicable in the collection of data as well as meeting the ethics standards.

Data Analysis Techniques

The paper applies the qualitative analytical methods to investigate both the language structure of Sindhi and the reactions of the learners: The semantic role of each item in a sentence (Agent, Theme, Experiencer, etc.) will be determined on the basis of predicate-argument structure and situation. The correct role assignment will be used as the benchmark, on Native Sindhi sentences. It is important to analyze the structure of arguments, as it assists in the formation of persuasive arguments. Connection between the verbs and verbal arguments will be discussed with respect to valance, case marking, and syntactic position. This discussion contributes to the reason why some roles are allocated in some situations. The sentence of learners will be analyzed with the occurrence of theta role assignment, omission of the argument, and L1 interference. The errors shall be divided according to the type and frequency with which they occur, and the systematic patterns will be identified. Contrasting approach will be used to comprehend variations in Sindhi and English theta roles by identifying areas that the learners are likely to get into interference or over generalization. This action puts teachers on board with the theta role pedagogical framework. Lastly, the results of theta role identification, argument structure analysis, error analysis, and contrastive analysis are going to be synthesized to conclude on the issue of learner difficulties, patterns of role in teaching Sindhi, and teaching implications. The synthesis of the two methods of analysis makes the entire analysis of the linguistic forms as well as the behaviour of the learner systematic.

Ethical Considerations

The most important consideration in research involving human subjects is ethical considerations. The measures to be taken will be as follows:

All participants will be informed in a clear manner regarding the purpose of the study, procedures, risks, and benefits of the study. Prior to data collection, written consent will be taken. Identities and personal information of the participants will be secured. All data will be stored in a secure place to avoid unauthorized access to it and every participant will be given unique identifier. The participation will be entirely voluntary and the participants will be able to withdraw at any point without any repercussions. This makes the entire involvement ethical and non-coercive. The researcher will make sure that the participants are comfortable and respected in everything they do by not taking them through any activity that they may find stressful or uncomfortable. The information will be applied to research only, and the results will be presented anonymously. Participants will remain anonymous, which means direct quotes. Through these ethics, the research will be ethical as it will not violate the rights, dignity, and welfare of the study subjects in addition to preserving the integrity and credibility of the study.

Data Analysis

In this section, the theta roles in the Sindhi language are analyzed in detail using genuine like sentences which were prepared in the study. Sindhi is an Indo-Aryan language with rich argument structure, and loose word order, which has a direct influence on theta role assignment. Knowledge of theta roles Agent, Theme, Experiencer, Goal, Source, Instrument, and Beneficiary play an important role in both theoretical and practical language teaching, particularly when teaching non-native speakers and writers.

Theta roles define the semantic relationship between a verb (predicate) and its arguments. For instance, in the sentence:

Example (S1):

علي ڪتاب پڙهي ٿو.

Ali kitab parhi tho.

Gloss: Ali (Agent) book (Theme) reads.

Translation: Ali reads a book.

Here, ‘Ali’ is the Agent, performing the action, while ‘kitab’ (book) is the Theme, the entity affected by the action. This simple declarative sentence illustrates the basic subject–verb–object relationship in Sindhi and the corresponding theta role assignment.

For this study, theta roles are identified in various sentence types, including transitive, intransitive, dative, causative, and experiencer constructions. Each sentence is analyzed systematically using the predicate-argument structure approach, and roles are tabulated for clarity

Method of Analysis

The analysis follows these steps:

1. Sentence Selection:

Randomly generated Sindhi sentences representing common structures were created, ensuring inclusion of all major theta roles.

2. Theta Role Identification:

Each argument in the sentence is identified and classified according to semantic role:

Agent, Theme, Experiencer, Goal, Source, Instrument, or Beneficiary.

3. Syntactic Position:

The **position of arguments** relative to the verb is noted, as Sindhi exhibits flexible **word order** (SOV, OSV, etc.).

- **Case Marking:**

Sindhi employs postpositions and case markers to indicate roles. These are highlighted to demonstrate how learners can identify theta roles.

- **Tabular Representation:**

For clarity, all sentences are presented in tables showing arguments, theta roles, syntactic positions, and case marking

Transitive Sentences

Transitive verbs take two arguments typically an Agent and a Theme. The following examples illustrate this structure in Sindhi.

Example (S2):

فاطمه ميو پسند ڪيو۔

Fatima mewa pasand kio.

Gloss: Fatima (Agent) fruit (Theme) liked.

Translation: Fatima liked the fruit.

Table 1

Theta Role Assignment in Transitive and Dative Constructions

Argument	Theta Role	Position	Case Marker/Postposition
(Fatima) فاطمه	Agent	Subject	None (nominative)
ميو (Fruit)	Theme	Object	None (direct object)

Analysis:

The Agent performs the action (liking), and the Theme is the entity affected. The sentence follows SOV word order, common in Sindhi, with the verb at the end. Non-native learners often **confuse** the Theme with the Agent if relying on English SVO patterns.

Example (S3):

رضا ڪتاب لکيو۔

Raza kitab likhyo

Gloss: Raza (Agent) book (Theme) wrote.

Translation: Raza wrote a book.

Table 2

Transitive Sentences

Argument	Theta Role	Position	Case Marker/Postposition
رضا (Raza)	Agent	Subject	None (nominative)
ڪتاب (Book)	Theme	Object	None (direct object)

Analysis:

Similar to S2, the Agent-Theme relationship is straightforward. However, Sindhi allows object-fronting for emphasis:

رضا ڪتاب لکھيو
Raza kitab
likhyo.

Here, the Theme appears before the Agent. Theta roles remain the same, but word order changes, which is a critical challenge for learners.

Intransitive Sentences

Intransitive verbs have a single argument, typically an Agent or Experiencer.

Example (S4):

ڪامي خوش آهي.
Kami khush aahe.
Gloss: Kami (Experiencer) happy is.
Translation: Kami is happy.

Analysis:

The Experiencer theta role represents someone undergoing a psychological or emotional state. Non-native learners often misinterpret Experiencer as Agent, especially if translating directly from English.

Example (S5):

هو سوئي ٿو
Hu soi tho.
Gloss: He (Agent) sleeps.
Translation: He sleeps.

Table 3

Theta Role Assignment in Intransitive Sentences

Argument	Theta Role	Position	Case Marker/Postposition
هو (He)	Agent	Subject	None

Analysis:

Here, the verb is intransitive, with the subject performing the action. The simplicity of intransitive structures makes them easier for learners, but agreement marking can be confusing.

Dative Constructions

Sindhi uses dative constructions to indicate recipients or experiencers, often with verbs expressing liking, feeling, or obligation.

Example (S6):

مریم کی ڪتاب پسند آهي.
Maryam ke kitab pasand aahe.
Gloss: Maryam (Experiencer) book (Theme) liked is.
Translation: Maryam likes the book.

Table 4

Theta Role Assignment in Dative (Experiencer) Sentences

Argument	Theta Role	Position	Case Marker/Postposition
مریم (Maryam)	Experiencer	Subject	ڪي (dative)
ڪتاب (Book)	Theme	Object	None

Analysis:

The dative postposition ‘پڪ’ marks the Experiencer, differentiating it from the Agent in transitive sentences. Non-native learners often omit or misplace the dative marker, leading to semantic confusion.

Example (S7):

عليءَ ڪي نند اچي رهي آهي۔

Ali ke nind achi rahi aahe.

Gloss: Ali (Experiencer) sleep (Theme) coming is.

Translation: Ali is feeling sleepy.

Table 5

Theta Role Assignment in Dative (Experiencer) Sentences

Argument	Theta Role	Position	Case Marker/Postposition
علي (Ali)	Experiencer	Subject	پڪ (dative)
نند (Sleep)	Theme	Object	None

Analysis:

Dative constructions often involve psychological verbs. Correct theta role assignment requires understanding postpositions and verb semantics.

Instrumental Sentences

Instrumental theta roles indicate the means or tool used to perform an action.

Example (S8):

يلع ملق ناس طخ يڪل ٿوٺ

Ali qalam saan khat likh tho.

Gloss: Ali (Agent) pen (Instrument) letter (Theme) writes.

Translation: Ali writes a letter with a pen.

Table 6

Theta Role Assignment with Instrumental Adjuncts

Argument	Theta Role	Position	Case Marker/Postposition
علي (Ali)	Agent	Subject	None
قلم (Pen)	Instrument	Adjunct	ناس (with)
خط (Letter)	Theme	Object	None

Analysis:

The Instrument is indicated by the postposition s. Based on English syntax, learners are likely to mix up the Instrument and the Theme. Sindhi permits the Instrument to be placed flexibly, but theta-role assignment is standard

Causative Constructions

Sindhi causative constructions add another player into the mix, the Causer, which makes another Agent do the action. This is what makes theta role assignment more complex, particularly to non-native learners, since the same verb can be used both in the transitive and causative forms.

Example (S9):

امين عليءَ ڪي ڪام ڪارڻ تي مجبور ڪيو۔

Ameen Ali-ke kam karan te majbur kio.

Gloss: Ameen (Causer) Ali (Agent) work (Theme) to force did.

Translation: Ameen forced Ali to do the work.

Table 7

Theta Role Assignment in Causative Sentences

Argument	Theta Role	Position	Case Marker/Postposition
علي (Ali)	Agent	Object	None

امين (Ameen)	Causer	Subject	None
ڪم (Work)	Theme	Object	None

Analysis:

Causative sentences are characterized by a definite roles hierarchy: the Causer is the initiator of the action, the Agent is the performer of the action, and the Theme is the victim of the action. Students tend to confuse Causer with Agent particularly when they are translating the English language that has less complex causative structures.

Example (S10):

استاد شاگرد کي مشق ڪارڻ تي آمرا ڪيو۔

Ustaad shagrid-ke mashq karan te amra kio.

Gloss: Teacher (Causer) Student (Agent) exercise do to order.

Translation: The teacher instructed the student to do the exercise.

Table 8

Theta Role Assignment in Causative Sentences (with Direct Object)

Argument	Theta Role	Position	Case Marker/Postposition
شاگرد (Student)	Agent	Object	None
استاد (Teacher)	Causer	Subject	None
ڪي (dative)	Theme	Object	None
مشق (Exercise)	Theme	Object	None

Analysis:

Causatives are a combination between dative marking and verb semantics. Semantic errors could occur because of the confusion of Agent and Causer roles by non-native learners. Introducing causative verbs makes the number of theta roles in the sentence grow, and it will have to be considered in a systematic manner.

Passive Constructions

In Sindhi, passive voice generally demotes the Agent and promotes the Theme to subject which changes syntactic realization/realization but semantic roles remain. Passive constructions are also a challenge to learners because theta roles are not necessarily consistent with surface syntax.

Example (S11):

ڪتابت يلغ ناراپ پڻويھ ويو

Kitab Ali parun parhiyo viyo.

Gloss: Book (Theme) Ali (Agent) by read was.

Translation: The book was read by Ali.

Table 9

Theta Role Assignment in Passive Sentences

Argument	Theta Role	Position	Case Marker/Postposition
علي (Ali)	Agent	Object	None
ڪتاب (Book)	Theme	Subject	None
پاران (by)	Postposed	Object	None

Analysis:

Passive forms In active constructions, the subject would occupy a subject position whereas in passive, the same would occupy a Theme position and the Agent would occupy a prepositional phrase. Taking English as a source of transfer and placing the incorrect Agent in the subject position may lead to misinterpretation in the learner.

Example (S12):

ميو مريم پاران ڪايو ويو۔

Mewa Maryam parun kayo viyo.

Gloss: Fruit (Theme) Maryam (Agent) by eaten was.

Translation: The fruit was eaten by Maryam.

Table 10

Theta Role Assignment in Passive Sentences

Argument	Theta Role	Position	Case Marker/Postposition
مریم (Maryam)	Agent	Object	None
میو (Fruit)	Theme	Subject	None
پاران (by)	Postposed	Object	None

Analysis:

Passive sentences make the Theme more prominent thus confusing the learner who is not used to such syntactic-semantic mismatch. This is the recognition of the Agent through postpositions.

Experiencer-Based Verbs

Experiencer theta roles occur in sentences in which the subject is experiencing psychologically or sensuously and this experience is commonly characterized by dative case. Sindhi is very liberal in the use of such constructions using verbs of like, fear, sleep or desire.

Example (S13):

عليء ڪي خوف لڳو.

Ali-ke khauf lago.

Gloss: Ali (Experiencer) fear (Theme) felt.

Translation: Ali felt fear.

Table 11

Theta Role Assignment in Dative (Experiencer) Sentences

Argument	Theta Role	Position	Case Marker/Postposition
علي (Ali)	Experiencer	Subject	None
خوف (Fear)	Theme	Object	None
لڳيو (dative)	Object	None	None

Analysis:

Dative marking signals the Experiencer, which is essential for semantic interpretation.

Learners often mistake Experiencer for Agent, especially with English transfer.

Example (S14):

مریم کی خوشی ٿی.

Maryam-ke khushi thi.

Gloss: Maryam (Experiencer) happiness (Theme) occurred.

Translation: Maryam became happy.

Table 12

Theta Role Assignment in Dative (Experiencer) Sentences

Argument	Theta Role	Position	Case Marker/Postposition
مریم (Maryam)	Experiencer	Object	None
خوشی (Happiness)	Theme	Subject	None
ٿی (dative)	Object	None	None

Analysis:

Experiencer verbs point to mental or emotional conditions and the learner needs to learn the semantic roles without reference to the syntactic prominence. The wrong production of sentences is caused by misinterpretation. Theta Roles in Multiple Sentences with complex theta roles are referred to as complex sentences. In Sindhi, several arguments may be provided in a clause; and they may contain Agent, Theme, Experiencer, Goal, and Instrument. These sentences can be used to study the learner comprehension of theta role interactions.

Example (S15):

عليء كي استاد پاران كتاب پڙهڻ لاءِ ڏنو ويو۔

Ali-ke ustaad parun kitab parhn laay dino viyo.

Gloss: Ali (Experiencer) Teacher (Agent) Book (Theme) read for given was.

Translation: Ali was given the book by the teacher to read.

Table 13

Theta Role Assignment in Passive (Experiencer) Sentences

Argument	Theta Role	Position	Case Marker/Postposition
علي (Ali)	Experiencer	Subject	None
استاد (Teacher) Agent	Theme	Object	None
كتاب (Book)	Object	None	None

Analysis:

This sentence consists of dative Experiencer, post positioned Agent and thematic object. In the case of non-native learners, the best example of learning to track theta roles through a variety of arguments involves learning about postpositions and verb semantics, so it is a good place to center teaching attention.

Example (S16):

امين قلم سان مريم لاءِ خط لکيو۔

Ameen qalam saan Maryam laay khat likhyo.

Gloss: Ameen (Agent) Pen (Instrument) Maryam (Goal) Letter (Theme) wrote.

Translation: Ameen wrote a letter for Maryam using a pen.

Table. 14

Theta Role Assignment in Multi-Argument Sentences

Argument	Theta Role	Position	Case Marker/Postposition
امين (Ameen)	Agent	Subject	None
مريم (Maryam)	Object	Object	None
خط (Letter)	Theme	Object	None

Analysis:

Goal and Theme are easily confused with learners, in particular where there are several arguments and postpositions. Systematic theta role analysis would be essential to prevent such errors in semantics of such sentences.

Complex Analysis

Causer roles are introduced through the causative verbs and are often misunderstood by the learners. Passive sentences will rearrange the Theme to subject position which makes it difficult to identify the Agent. Verbs of experience are dependent on the dative case; English learners usually wrongly categorize dative case. Many-argument sentences in complex sentences should be carefully taken into account in regard to postpositions and theta role hierarchy.

Theta Role Assignments and Postpositions in Complex Sentences

Table 15. Sentence Agent Causer Experiencer Theme Goal Instrument Postpositions

Sentence	Agent	Causer	Experiencer	Theme	Goal	Instrument	Postpositions
S9	امين علي	-	ڪم	-	-	-	ڪي
S10	استاد شاگرد	-	مشق	-	-	-	ڪي
S11	علي	-	ڪتاب	-	-	-	پاران
S12	مريم	-	ميو	-	-	-	پاران

Table 16. Sentence Agent Causer Experiencer Theme Goal Instrument Postpositions

Sentence	Agent	Causer	Experiencer	Theme	Goal	Instrument	Postpositions
S13	-	-	علي	خوف	-	-	ڪي
S14	-	-	مريم	خوشي	-	-	ڪي
S15	استاد	-	علي	ڪتاب	-	-	پاران، ڪي

S16	امین	-	-	خط	مریم	قلم	لاء، سان
-----	------	---	---	----	------	-----	----------

Discussion of the Findings

Findings of this research prove that theta role assignment in Sindhi is regular however, obscured by the flexible word order and abundant postpositional marking which collectively pose enduring challenges to non-native learners. In this chapter, these results are discussed in terms of Government and Binding (GB) Theory, Minimalist visions, lexical semantics, and second language acquisition studies, and illustrate how the data support and extend available literature. It further elaborates how the mistakes of learners especially those related to dative marking and complicated structure of the argument justify the necessity of a linguistics based pedagogical model of teaching the Sindhi language to the non-native learners.

The initial research question was the type of theta roles which exist in the Sindhi sentence structures. The analysis establishes the existence of core roles, in terms of both transitive and intransitive, dative, causative, passive, and complex clauses, of Agent, Theme, Experiencer, Goal, Source, Instrument, Beneficiary, and Causer, which are distributed in a systematic manner, and which testifies to the fact that Sindhi has in common morphosyntactic resources with the widely attested semantic role inventories without exception.

The second question was about the manner in which these roles are allocated to the arguments in Sindhi clauses. It is found that theta role assignment is conditional on verb specific argument structure together with case marking and postpositions (یک، ناس، ۽ لا ناراپ)، and not on reduced word order, in such a way that the same role can be found in various positions without altering its meaning. This highlights the need to educate the learners to read postpositional and agreement cues as opposed to the use of linear order only.

This research, in comparison to the current literature on theta roles in high resource Indo Aryan languages, provides theoretical discourses further to a low resource Indo Aryan language where argument structure has been characterized in traditional or morphological terms. Although the previous research in Sindi has centered on morphology, the properties of pro drop and computational resources, it has not provided a systematic mapping of theta roles in different types of clauses, and has not provided an explicit connection to second language learning, thus this is where a gap of this thesis starts to be close. In the context of SLA, the results resonate with larger arguments that interface effect and interpretive mismatches present certain difficulties and introduces a new dimension as they demonstrate the presence of these difficulties in a postposition rich flexible, flexible order of South Asian language. These patterns of error observed are echoed with the traditions of contrastive and error analysis in that they show that certain L12 differences, like the lack of dative Experiencers and explicit Causer markers in English, predict areas of continued difficulty and thus confirm the usefulness of contrastive analysis, as an aid to pedagogical design.

The results of this paper give a tangible empirical foundation to the development of a pedagogical structure of theta role to Sindhi. The findings of the research by connecting certain structural patterns (dative Experiencers, causative hierarchies) with common learner errors would provide information on specific areas where the instructional materials would need to focus explanatory effort and practice tasks. The argument thus substantiates the thesis statement that the introduction of formal theta role analysis in Sindhi language instruction can help close the gap between the linguistic theoretical background and language instruction practice in classrooms and assist more nonnative children studying in multilingual Pakistani and region setting.

Conclusion

This study gives an organized summary of theta role assignment in Sindhi and demonstrates how the knowledge of theta role can be of great help to nonnative learners in their understanding and production of Sindhi sentences. In the chapter below, you will find the

general conclusion as well as the practical recommendations of the study based on the aims, the literature, and the methodology of the study as written in your thesis draft.

The researchers had two primary aims in their study, which were to determine what kinds of theta roles were actualized in Sindhi, and to describe how Sindhi verbs allocate these roles in a grammatical system. Collectively, the work confirms that Sindhi has a rich and regular arrangement of argument structure in which the central roles of Agent, Theme, Experiencer, Goal, Source, Instrument, Beneficiary, and Causer are consistently encoded by verb semantics, agreement and case/postpositional marking. According to the study, theta roles are predictable, despite the relatively loose word order of the Sindhi language, once the underlying verb argument relations and morphological signatures are known.

Meanwhile, the results point out that it is precisely these properties of Sindhi that cause the problem of theta role acquisition in case of non-native learners who come to the language with the expectations being predetermined by more rigid, word order based systems like English or by other Indo Aryan systems like Urdu. Learners will tend to over rely on linear position, think that subject are always Agents and usually ignore or fail to understand important cues like dative and instrumental postposition. The result is systematic misassignment of Experiencer, Instrument, Goal, and Causer roles particularly in dative, causative and passive constructions. The thesis thus comes up with the conclusion that it is not enough to apply a purely descriptive or form focused approach to the teaching of Sindhi but rather to apply a linguistics informed theta role approach that brings out an underlying semantic structure of sentences that can be made explicit, accessible and teachable.

The initial significant discovery is that Sindhi adheres to the universally accepted stocks of thematic positions, but achieves them by language particular morphosyntactic means. Verbs project stable theta grids and the roles are assigned to the arguments and agreement patterns and postpositions are used to map them to the arguments instead of a fixed word order. This is an addition to theoretical linguistics because the generative and lexical semantic explanations of argument structure are extended to an under documented Indo Aryan language, thus adding to the cross linguistic comparison and testing theories.

Recommendations

Out of the findings of the study, the following recommendations can be given to the teachers, curriculum developers and institutions dealing with non-native Sindhi students: In the early days of the course, introduce core roles (Agent, Theme, Experiencer, Goal, Source, Instrument, Beneficiary, Causer) as conceptual resources, not theoretical terms. Examples Simple Sindhi sentences should be used to demonstrate each role, with increasingly complicated constructions like ditransitive, causatives, and passives. Work on special activities related to the common postpositions (e.g. dative, instrumental, goal marking forms), demonstrating the effect of a shift of postposition on the semantic role despite a similar word order. Give contrastive exercises in which the learners compare the similar sentences with one postposition different and explain the changes in roles.

References

- Ahmad, A., Cheema, M. I., & Farhat, P. A. (2023). Exploring Challenges and Barriers Faced by Pakistani Scholars and Researchers in Publishing Their Work. *International Journal of Contemporary Issues in Social Sciences (IJCISS)*, 2(4), 81-90.
- Ahmad, A., Farhat, P. A., & Abbas, T. (2024). Critical Discourse Analysis of Bulleh Shah's Poetry. *Remittances Review*, 9(3), 299-312.
- Ahmad, A., Farhat, P. A., & Choudhary, S. M. (2022). Students' Insights about the Influence of Text Messaging on Academic Writing Skills. *Journal of Development and Social Sciences*, 3(4), 522-533.

- Ahmad, A., Khokhar, M. I., & Shaheen, R. (2026). Analyzing The First Mexican-American Laureate Poet Ada Limón's Poem "How to Triumph Like a Girl" through Literary Lens. *The Critical Review of Social Sciences Studies*, 4(1), 396-409.
- Ahmad, A., Shahid, S. H., & Farhat, P. A. (2023). Comparative Analysis of Syntactical Errors in the Writings of ESL Students at Secondary Level in Pakistan. *Global Language Review*, VIII(II), 203-213.
- Ali, M., & Wagan, A. I. (2019). An Analysis of Sindhi Annotated Corpus using Supervised Machine Learning Methods. *Mehran University Research Journal of Engineering and Technology*, 38(1), 185–196. <https://doi.org/10.22581/muet1982.1901.15>
- Ali, S., Shah, S. A., Fatima, N., & Sherazi, S. K. (2025). ANALYSING THE IMPACT OF CHATGPT ON UNDERGRADUATE ENGLISH LANGUAGE LEARNERS AT THE UNIVERSITY OF BUNER. *Journal of Applied Linguistics and TESOL (JALT)*, 8(1), 20-37.
- Ansari, A., Ahmad, A., & Shaheen, R. (2025). Impact of Socio-Economic Status (SES) to Access the Quality English Education. *The Critical Review of Social Sciences Studies*, 3(4), 2768-2776.
- AROOJ, F., PERVEEN, A. F., & NIGHAT, S. (2025). ANALYZING THE CLINICAL ENCOUNTERS BETWEEN DOCTORS AND PATIENTS IN PUBLIC HOSPITALS. *JOURNAL OF ARTS AND LINGUISTICS STUDIES Учредители: Mega Institute for Advance Research and Development*, 3(1), 521-542.
- Arshad, Z., Mehmood, M. S., & Ahmad, A. (2025). Exploring the Educational Memes in Recent Indo-Pak War. *Dialogue Social Science Review (DSSR)*, 3(8), 87-102.
- Cohn, N., & Paczynski, M. (2013). Prediction, events, and the advantage of Agents: The processing of semantic roles in visual narrative. *Cognitive Psychology*, 67(3), 73–97. <https://doi.org/10.1016/j.cogpsych.2013.07.002>
- Dootio, M. A., & Wagan, A. I. (2018). Unicode-8 based linguistics data set of annotated Sindhi text. *Data in Brief*, 19, 1504–1514. <https://doi.org/10.1016/j.dib.2018.05.062>
- Dootio, M. A., & Wagan, A. I. (2018b). Unicode-8 based linguistics data set of annotated Sindhi text. *Data in Brief*, 19, 1504–1514. <https://doi.org/10.1016/j.dib.2018.05.062>
- Farhat, P. A., & Niazi, S. M. (2024). Contrastive analysis of consonant sounds: A perspective of English and Urdu languages. *Pakistan Social Sciences Review*, 8(1), 423-436.
- Fatima, N., Wahab, A., Shah, K., & Azhar, M. (2025). A DIACHRONIC LINGUISTIC STUDY ON THE HISTORICAL EVOLUTION AND DEVELOPMENT OF ENGLISH SYNTAX STRUCTURES. *Contemporary Journal of Social Science Review*, 3(2), 1756-1764.
- Hussain, A., Farhat, P. A., & Aslam, M. (2023). Teaching Language Skills to Young Learners through Activities: A Case Study of Primary Schools in Gujrat. *Annals of Human and Social Sciences*, 4(2), 427-439.
- Ionin, T., Ko, H., & Wexler, K. (2004). Article Semantics in L2 Acquisition: The role of Specificity. *Language Acquisition*, 12(1), 3–69. https://doi.org/10.1207/s15327817la1201_2
- Khan, A., Farhat, P. A., & Ali, S. (2023). A Study on Students' Perception: Enhancing Speaking Skill for ESL Learners through YouTube. *Global Digital & Print Media Review*, 6(2), 312-323.
- Kochmar, E., & Shutova, E. (2017). Modelling semantic acquisition in second language learning. *Journal*, 293–302. <https://doi.org/10.18653/v1/w17-5033>
- Rahman, M. U. (2009). *Sindhi morphology and Noun inflections*. <https://www.semanticscholar.org/paper/Sindhi-Morphology-and-Noun-Inflections-Rahman/1302a9dfd26e664a19bc310c527f0ce3377e9871>

- Rahman, M. U. (2009). *Sindhi morphology and Noun inflections*. <https://www.semanticscholar.org/paper/Sindhi-Morphology-and-Noun-Inflections-Rahman/1302a9dfd26e664a19bc310c527f0ce3377e9871>
- Rahman, M. U., & Bhatti, M. I. (2010). *Finite state morphology and Sindhi Noun inflections*.
- Rashid, R., Riaz, M., Abdullah, M., & Ahmad, A. (2026). Activity-Based Teaching: A Strategy for Promoting Engagement in Science Education. *The Critical Review of Social Sciences Studies*, 4(1), 1128-1136.
- Riaz, M., Rashid, R., Sanam, A., & Ahmad, A. (2026). The Nexus between Leadership, Teacher Personality, and Student Achievement: A South Punjab Study. *The Critical Review of Social Sciences Studies*, 4(1), 484-502.
- Sherazi, S. K., Sajjad, K., Fatima, N., & Shah, S. A. (2025). Syntactic Ambiguity in News Headlines: A Linguistic Analysis of Structural Ambiguity and Its Interpretative Effects. *Journal of Applied Linguistics and TESOL (JALT)*, 8(2), 1206-1226.
- Slabakova, R. (2010). Semantic Theory and second language acquisition. *Annual Review of Applied Linguistics*, 30, 231–247. <https://doi.org/10.1017/s0267190510000139>
- Strick, G. J. (1980). A HYPOTHESIS FOR SEMANTIC DEVELOPMENT IN a SECOND LANGUAGE. *Language Learning*, 30(1), 155–176. <https://doi.org/10.1111/j.1467-1770.1980.tb00156.x>
- Thothathiri, M., Asaro, C. T., Hsu, N. S., & Novick, J. M. (2018). Who did what? A causal role for cognitive control in thematic role assignment during sentence comprehension. *Cognition*, 178, 162–177. <https://doi.org/10.1016/j.cognition.2018.05.014>
- Ullah, N., Farhat, P. A., & Asim, N. (2025). A critical discourse analysis of how Pakistani national identity is represented in english newspapers and digital journalism. *Journal of Applied Linguistics and TESOL (JALT)*, 8(4), 439-449.
- Yousaf, I., Abro, B. A., & Ahmad, A. (2025). Critical Discourse Analysis of the Symbolic Language in Shakespeare's Selected Dark Lady Sonnets. *Indus Journal of Social Sciences*, 3(3), 2019-230.
- Zahid, A. (2016). *Morphosemantic and syntactic analysis of verbs in Sindhi / Zahid Ali*. <https://www.semanticscholar.org/paper/Morphosemantic-and-syntactic-analysis-of-verbs-in-Zahid/e4ec42f9c821db2b136ac0d660d7830e86ff8374>
- Zainab, S., Farhat, D. P., & Basharat, D. A. (2020). Critically analyzing war on terror in the light of Fatima Bhutto's "The shadow of the crescent moon.". *International Journal of English Literature and Social Sciences*, 5(6), 2247-2251.