Comparative Thematic Analysis of Social Science Research Articles by Pakistani and British Research Scholars: A Corpus-Based Study

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Abstract:

Writers maintain the texture of the text and information with appropriate thematic choices. Previous studies have established that the problem of jumbled information existed in the academic writings of non-native English writers. Considering this, the present study aimed to analyze social science research articles written by Pakistani and British researchers keeping textual metafunction as the focal point. The objectives were to explain the functional interpretation of the thematic structures and figure out the dominant theme type in collected 160 research articles. The data was analyzed through feature coding of UAM corpus software to find out frequencies and percentages of themes and their types. The results revealed that the frequencies of themes in Pak-19 and Pak-20 were 1066 and 1252, while the frequencies in Bri-19 and Bri-20 were 1519 and 1883. Further, the findings suggested that the topical theme was frequently used as compared to textual and interpersonal themes. The second highest ratio was of textual theme as the frequencies of interpersonal theme were less as compared to textual. The topical themes functioned as noun groups, while the textual themes connected new information with previous information. Based on the findings, it was established that unmarked topical themes were prevailing in the research articles. Further, the use of finite, continuatives, and conjunctions was prevalent in textual themes.

Keywords: thematic choices, textual metafunction, thematic structures, research articles, corpus, types of themes

Introduction:

Background of the Study:

From the perspective of SFL, each language, in a semiotic sense, is a resource for meaning-

making. Language has been created to serve humans' lives, and it exemplifies a positive impression of tasks. Language must be explained in terms of implications produced inside a social framework.

SFL represents language from two semantic edges:

1. Every speaker has a semiotic framework to convey his/her meaning. However, the semiotic alternatives distract the speaker and create a problem in the transfer of meaning.

2. According to the semiotic framework, when we talk about a specific perspective using the socially developed framework, it leads to appropriate results.

The role of thematic choices in arranging the message is significant as the thematic choices signal out the old and new information, stress certain information, interpersonal relations, and linkages or transitions. In SFL, the aspect of 'Theme' is one of the three significant aspects. The other two are 'transitivity' and 'Mood'. The theme is dealt with under the meta function known as textual meta function. Nunan (1993) defined theme as the starting point or initial position of the sentence that links the given information to the following clause. While analyzing a sentence from the perspective of textual meta function, the sentence is divided into two parts 'theme', and 'rheme'. The theme, according to Halliday (1994), is the departing point that determines the cohesion in the clause. The message in the clause can be identified properly with the help of the theme. The part of the sentence that tells something about the theme is known as rhyme.

Statement of problem:

In academic writing, the issue of jumbled information has been noticed, and the issue can be analyzed from the perspective of textual meta function. The problematic area and the need for the study focusing on the analysis of thematic choices made by non-native and native English researchers encouraged the researchers to conduct a thematic analysis of the academic writings of Pakistani and British researchers. We, therefore, decided to specify this field and selected research articles from the discipline of social science written by British and Pakistani researchers. Based on Munir (2022), the present study is corpus-based as it focuses on the comparative analysis of thematic structures found in British and Pakistani research articles.

Objectives of This Study:

The objectives of the research are provided below:

1. To comparatively investigate thematic choices made in texts of research articles written by British and Pakistani researchers.

2. To interpret the functions of the thematic choices made in the texts of the articles.

Research questions of this study:

The study was guided by the following research articles:

1. What thematic choices have been made in texts of research articles written by British and Pakistani researchers?

2. To what extent do the thematic choices employed by British and Pakistani researchers differ?

3. What functions are these thematic choices performing?

Delimitations of the Research:

The researchers deliberately de-limited this study to increase its credibility. The following are the delimitations of the study:

1. The study was delimited to the investigation of written academic text only.

2. The written text was taken from Pakistani and British research articles.

3. The study dealt with a single aspect of the textual meta function, termed a theme.

4. The research articles were restricted to the social science field.

5. The research articles published in 2019-2020 were taken for analysis.

Literature Review:

Theoretical Framework

- **Meta functions of language:**

Halliday (1994) asserted that language is a network or a system that helps in making meaning. In other words, language is a meaning-making. These meanings are realized through the functions of language. According to Halliday (1994), the meanings are realized in and through three meta functions of the language. The three meta functions as highlighted by Halliday have been provided below:

1. Ideational meta function that deals with the representation of experience.

2. Interpersonal meta function that deals with social relations.

3. Textual meta function deals with the embodiment of the message in the clause.

- **Semantic feature**

The complete semantic system could be defined as "text formation", where the next term is the product of the four meanings: experience-based, logical (element of imagination), interpersonal, and textual. Each of the three formulas is part of a different functional array that forms a separate new thread for the clause. As the job significance calculation, it can define these item differences as follows:

a) The point of departure in the clause is termed a theme, while the message or the content

in the clause about the theme is known as a topic.

b) The function of the theme is to perform which means that the action of exchange in the clause acts as the transaction between the narrator and the listener to produce meaningful information. So, the topic qualifies as a guarantee of the exchange, and the speaker is responsible for the validity of what says.

c) The third is an actor as the structure of the clause as representation. A representation clause places the actor as an active participant in each interaction process.

The Textual Meta function-Clause as a message:

As per Halliday (1994), the interpretation of language in its role as a message is known as the textual meta function of language. According to Davidse (1987), meta-functions of language can be explained in terms of intrinsic and extrinsic factors. First off, they are both different grammatical constructions and semantic organization principles. Nevertheless, ideational, and interpersonal functions eventually allude to social reality. Language is used in society for both intrinsic and extrinsic purposes (1987). According to Davidse (1987), the primary concept of Halliday's theory is that of meta functions, which serve as an illustration of the internal order of language and are systematically linked to the field, tenor, and mode variables. The resource to create a local context for a sentence is to select a local point of departure inside the data stream. Adding context-relevant information bothers the textual means. For written and spoken messages to be coherent, this is crucial. The purpose of the clause is to formulate a statement. The clause's central idea is a theme (Halliday, 1994).

Fahimnia (2009) examined Persian textbooks intended for elementary school students and assessed the metafunctional theme using Halliday's methodology. According to Fahimnia's findings, the categories in Halliday's systemic grammar are flexible. In six volumes and nineteen articles of science writings from Persia and England, Kazemi (2012) investigated the subject. She examined the theme-rheme framework concurrently and demonstrated the theme-rheme comparison and contrast elements in addition to the present labeled subjects in Persian and English.

The textual metafunction, or means, is used to create the clause as a message. Putting the texts on display in a way that makes sense as a whole is the goal. It concerns how the data from each particular clause is arranged within the text. Additionally, it is indicated in the message clause that the subject clause can be further classified into three groups, each of which has a specific function inside a clause. These groups include thematic (ideal), textual, and interpersonal. Through the employment of the theme-rheme system, the message at the end of this clause

organizes the texts' cohesiveness.

Types of themes:

The structure of dimensional meta function has three types of a clause: a topical,interpersonal, and textual theme. These types have been explained below:

The Experiential/Topical theme:

When a phrase has some "representative" meaning, the first element is the theme's experiencing stage or the topical theme. An element that serves as subject, adjunct, and complement is the topical element within the theme (Halliday, 1994). Subject matter can be classified into two categories: marked and unmarked.

Noun complex groups, noun groups, and embedded clauses are all functions of the unmarked topical theme. Although the designated topical subject is further categorized into the adverbial and prepositional groups, it also serves as an adjunct and complement.

The Interpersonal theme:

The Interpersonal themes function to code the speaker's or writer's judgment of meaning. They may be modal adjuncts, vocatives, finite, or WH elements. Additionally, the interpersonal theme is the initial part of mood clauses, where major clauses include social themes but minor clauses do not include social themes. The most important clauses are indicative, imperative, declarative, and questioning in conjunction with yes/ no integrative or Wh-clauses. Typically, Modal (Adjunct) is done by an adverb. It provides the speaker's comments, evaluations, or attitudes toward the message. The vocatives are any item used to address, typically though not necessarily a personal name. It is a floating element that can come anywhere, and if it precedes the topical theme. It is an item used to address, typically though not necessarily a personal name. The vocative is a floating element that can come anywhere, and if it precedes the topical theme, it is thematic. WH-Interrogative themes indicate that the addressee needs an "answer". Its function is to specify the entity to be supplied by the questioner. The WH-element is always linked to one or the other of the topical theme's functions; a participant or circumstance, i.e., this theme features works simultaneously as a topical theme.

The Textual theme:

The Textual themes are introduced to the initial position of the clause continuous, conjunctive, and conjunctive adjunct. A continuative is one of a small set of discourse signalers like yes, no, well, oh, nowthat indicates that a new move is starting, and they do not choose either positive or negative, i.e., they reflect the current polarity. Structural interconnections link two clauses in a coordinating relationship or mark one clause as dependent on another. Relative elements serve

as textual and topical themes since they relate the relative clause to the preceding one. The conjunctive adjunct brings a cohesive connection back to the previous speech. Wherever it happens, the topical themes precede it.

Thematic equatives:

It is not specially built by the thematic system; a special theme resource groups two or more separate elements to form a single part of the Theme + Rheme structure. An example of this would be:

What he gave my aunt was this kettle.

Predicated theme

A key feature of thematic equative is that they combine more than one message element into a single sentence component, acting as a theme. Another thematic structure allows the speaker to highlight a single element and give it an emphatic thematic status.

Model:

This study is concerned with Systemic Functional Grammar in general and textual meta function in particular. The scheme used for the analysis is given below.

New schemata:

Table **2.2:** *Scheme for Data Analysis*
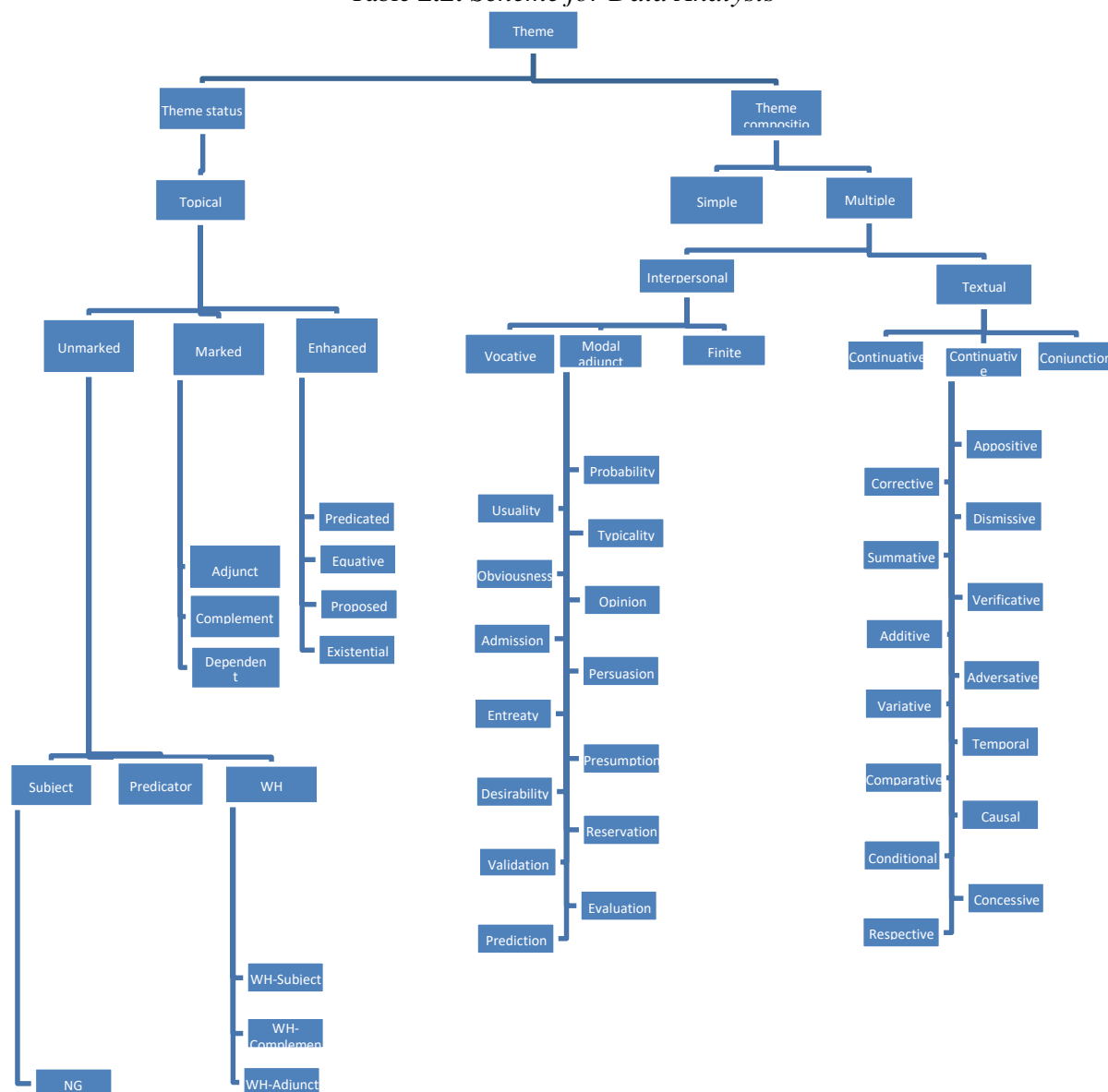
Previous studies:

For analysis, the investigator chose a few papers that were pertinent to the subject at hand. Previous research has shown the depth to which the phrase "theme-rheme" may be used in organizing and understanding written material.

Halliday's textual metafunction was studied and suggested for use as a teaching aid for evaluating L2 cohesion and coherence in a case study research project by Paiva and Freitas (2011). These results show that teachers may assess students' writing from a discourse perspective, avoid concentrating too much on students' phrase-level errors, and get a deeper understanding of students' writing styles by stressing the use of textual analysis concepts. Results show that three objectives might highlight the use of textual analysis concepts. The first benefit is that it may help instructors improve the strength and quality of the written feedback that students provide. It might be advantageous for teachers to see how the text is

structured for the students.

Research on the theme progression and evolution in academic English papers and their Persian translations was done by Jallilifar and Khedri (2011). Nine books on applied linguistics in English, together with their translations, were selected as model academic texts for analysis. The first three pages of each chapter were examined. From these works, one may infer that Iranian universities provide graduate- and undergraduate-level applied linguistics courses. Through the use of Halliday's (1994) thematic arrangement and McCabe's (1999) theme development, they completed this. In terms of thematic growth and progression, there are notable differences between the original works and their Persian counterparts when comparing unmarked and many topics. Adebola (2011) focused on the textual organization theme-rheme model in the structural patterns of information in a sample of male and female text messages using Halliday's Systemic Functional Linguistic (SFL). According to Adebola's results, authors who were male and female employed different topical themes at different frequencies. The author concluded that textual analysis is a useful technique for improving accurate text comprehension, upholding the writer's intended message in the face of obstructive evidence, and emphasizing essential topics.

To organize the material and foster comprehension and communication, Ebrahimi and Khedri's (2012) experiments used topic patterns and development. They used the theme-rheme translation as a discourse mode to highlight the credence of the authors' statements, despite using discourse as a research technique. Even while they were using discourse as an investigative tool, they added emphasis to the author's arguments by using theme and rhetorical translation as discourse modes. The evolution of the themes was examined by Khedri (2012). Our knowledge of the production and use of texts would presumably be poorer without the sound knowledge of thematic progression, according to this research. For teachers to help students produce writing that is coherent and logical, they must force them to consider the traditional descriptive linguistics of the sentence while teaching writing. This research's findings support the effective application of theme and rheme patterning in the classroom to benefit students. Knowledge of these cohesive tools and theme patterns may help students create a coherent composition in four different ways. i)They can see any points at which problematic choices of subject, development, or both are hurting their arguments. ii) The author employs interpersonal themes to convey their viewpoint and structure of exchange; iii) The author employs topical themes to symbolize the propositional content; and iv) The author employs textual themes to arrange the message within the clauses to create texts and specify a context in which the reader will understand their message. And therefore, to write coherent

papers, students need a lot of help.

Speaking to Chinese English language learners, Jing (2013) focused on helping them develop speech themes. With regard to textual topical and marked themes, the results showed that advanced Chinese learners are much closer to native speakers. Consequently, the researcher looked at how themes in English spoken by Chinese language learners emerge in the absence of specific instruction or background. Two areas of difficulty for intermediate Chinese learners of English were identified, together with the two explanations for this disparity, by this research that looked at the usage of suggested and textual topics. According to these findings, the study suggests doing more research to determine if and to what degree English language learners will perform better than those who do not get assistance in choosing themes. The recurrent theme accounts for 9%. Three distinct forms of themed progressions are identified: two theme components (36.50 percent), three elements of thematic progression (18.25 percent), and four elements of thematic progression (18.25 percent).

In English romantic and criminal short tales, Ghaleasadi (2013) focused on reading comprehension of a textual subject. An extensive array of literary tropes was used by the English short tales that investigated themes of crime and romance in this research. The concept that the two short tales' linguistic themes were similar, as shown by the analysis's overall results, was the most intriguing. All of these short tales were ultimately determined to fall under the same family group. Based on the investigation, the hypothesis that genre influences theme selection was validated. Some tales had not only a similar genre but also parallels in the discourse's field, style, and tone, as well as in their textual and contextual characteristics. With connectors and conjunctions being utilized more often than conjunctive adjuncts and continuatives in both corpora, readers may more quickly understand the facts by drawing logical conclusions about the occurrences. The themes covered in the book make sense and are coherent, and it can be said that these writing qualities have a big impact on how well readers understand things. To improve reading comprehension, this knowledge is crucial since it may help students see through misunderstandings and text blindness to understand the discourse sign structure.

The metafunction of the text was the only focus of Wang's (2014) investigation. Monitoring SFL's evolution and its use in translation studies was something the researcher did. SFL and Theme/Rheme analysis explain more fundamental concepts. SFL is a technique that systematically connects language choices to the sociocultural environment; therefore, it is advantageous to find a connection between discovery and descriptive translation research.

A Haunted House by Virginia Woolf, Black Cat by Edgar Allan Poe, and The Tell-Tale Heart

by Virginia Woolf all have thematic resources that Hasan (2015) identified. Examining the variations in topic framework use between Arabic and English is the aim of the project. The research studies the effects of translating literary works from English to Arabic on markedness, topicalization, and attention. A Haunted House by Virginia Woolf, The Tell-Tale Heart by Edgar Allan Poe, and Poe's The Black Cat are the three works in which markedness is shown to be used as a literary technique. Different modifications are made to Arabic translations of English literary masterpieces with linguistic comments.

When translating Indonesian thesis abstracts to English, Damayanti (2016) looked at theme equivalency, topic changes, and different sorts of analysis. From the Semarang State University Postgraduate Program throughout the previous two years, 2012–2011, 10 abstract theses with English translations make up the data. 81.16 percent (198 out of 247) in ST and 79.56% (222 out of 279) in TT, respectively, indicate that the thematic concern is prevalent in all texts. TT and ST don't have any interpersonal themes. Scenarios and methods come after the subjects that affect participants the most. As the literary theme in both texts, the conjunctive adjunct functions. Two-thirds of the themes are seen as non-shifting or comparable. The alterations to the theme grammar (11.7%), the addition of new themes (14.7%), and the removal of themes (3.4%) are the three processes that resulted in the theme change. Apart from the grammatical structures of the source language (SL) and the target language (TL), the translator should possess a comprehensive grasp of the shift and equivalency concepts and their application.

Using a functional grammar approach, Puspa (2016) focused on the theme and rheme in the Twelve Dancing Princesses short story. Results indicate that there are two types of themes that might be present in this work: textual and topical themes. Potentially, this study has no interpersonal themes. This kind of textual subject also includes structural components, conjunctions, continuatives, conjunctive adjuncts, and conjunctions as topic parts. The chosen topical theme (an adverbial), on the other hand, and the subject make up the components of chronological themes. These studies have chosen and arranged the text of the short story to determine the connection between the topic and text development. By breaking down the text into individual clauses, one may therefore comprehend the book's overall texture and how the author used the theme-rheme structure to express the essence of his initial worries. Presently, the inquiry was limited to the content and theme of the short narrative Twelve Dancing Princesses. Thus, there may be a combination of modern and literary subjects. In the present research, we have also identified the components of a topic and attempted to establish a connection between theme development and text development.

Using two sets of commercial websites from different nations (Great Britain and Romania),

Stoian and Dejica (2016) evaluated the content, rheme, and interpretation on a small scale. This primarily examined three documents, each of which had a worldwide list of World Heritage Sites. First, the texts included in the research were compared and analyzed. Their thematic structures and motifs were examined from a systemic functional point of view using Halliday's textual analysis process.

Studying two inauguration addresses and how decisions made by speakers in difficult situations impact meanings is the aim of Ezeifeka's (2016) research. Speaking about late news, speakers seem to carefully choose which items to emphasize and give prominence to. The arrangement of words inside a phrase's syntax, rather than their semantic meaning, is mostly responsible for the perception that texts carry more information than simply the words they contain. To distinguish between official meanings and any hidden interpretations that the material's presentation may have suggested, it is thus necessary to carefully read texts. Comprehending the basic terminology used in CDA takes importance.

According to Stella (2017), these hotels' websites have primary themes and rheme schemes. The core or basic structures of rheme and theme are still evidently used by hotels when writing their messages on their websites, as opposed to the variational second structure. Both theme and rhyming frameworks are primarily used on these hotels' websites. The main structure—the core theme and rheme structure—is still evidently used by hotels when writing messages on their websites, as opposed to the second structure that has been updated.

Looking at Indonesian narrative texts through the lens of SFL's textual metafunction, Nurlela, Gustiaingsih, Sofyan, and Rosa (2017) identified common characteristics. Some of the attributes of the clause thematic development include the many theme clauses that are used prominently, the marked theme clauses that are often used, the process and circumstance that are frequently used as the theme sections of the clause, and the continual continuous theme that is regularly used. The creation of these features was prompted by their study of the translation of the novel "Hikayat Deli" from Malay into Bahasa Indonesia.

Koutchadé (2017) is a researcher who studied "Linguistic Description and Interpretation of Textual Metafunction in Selected Nigerian News Reports." In this research, the language employed in the two news stories was evaluated using linguistic analysis. It has been shown that there is less difficulty in determining the discourse mode in two texts using textual meaning inquiry. The meaning of the text is connected to the mode, which, according to Eggins (2004), indicates how language is used in communication. As things are, there is no direct communication between the two authors and readers; thus, the two books utilize language to convey experiences. Reviewing the two news articles has shown the importance of the Chibok

girls' declaration, the Nigerian government's efforts to negotiate their release, the girls' meeting with their parents, and the Nigerian military's war on terrorism, as documented in the selected texts.

Examining the development and thematic choices in WASPADA newspapers' sports articles was the goal of Astuti (2018). The findings suggest topic and rheme are used to create thematic frameworks in Waspada's sports writing. Many topics are covered in Waspada's sports works, which are used mostly as instruction. The unmarked theme also dominates Waspada's sports text throughout. To draw the reader in, every sentence starts with an unmarked subject that expresses the most important information. For theme analysis, several further studies using a variety of data sets have been conducted. Yet, the main objective of this work is to analyze themes in academic writing using a corpus, namely social science research articles written by British and Pakistani scholars and published in 2019 and 2020. This area of study has not been distinguished by other research studies. Utilizing a novel textual metafunction theme-rheme analysis, the researcher had to conduct the present investigation. This study is expected to be beneficial for future researchers, instructors, educators, and educational practitioners.

Materials and methods:

Research design:

According to Schumacher and Macmillan, a research design is a set of structures, techniques, and plans for an investigation that leads the research questions to their answers. This quantitative research approach answers the research questions in the present research. The study was conducted to analyze Pakistani and British research articles' written text. The thematic relations have been applied to the written text.

Sampling and data collection:

To achieve the objectives of the current study, social science research articles written by Pakistani and British research scholars were collected in pdf form using different national and international journals.

Convenience sampling was used because the researcher had considered specifications related to the data collection. A total of 160 Pakistani and British research articles were collected. Eighty research articles belonged to Pakistani research, and 80 were British. The researcher conducted an online survey to observe the social science research articles before data collection. After completing an online survey, four journals were selected for the data collection procedure. Those were Pakistani and British journals. The following four British journals were selected for data collection.

1. Cambridge Journal of Economics
2. The Journal of Law
3. British Journal of Humanities and Social Sciences
4. Journal of Language Evolution

The following four Pakistani journals were selected for data collection.

1. Pakistan Journal of Social Sciences
2. Technium Social Sciences Journal
3. Pakistan Journal of Life and Social Sciences
4. Pakistan Journal of Commerce and Social Sciences

Development of corpora:

The researcher converted the collected data into corpora form. Pakistani and British research articles consisted of 859024 words. However, 114770 words had been selected for analysis. The data from Pakistani and British research articles were analyzed separatelyto ensure similarities and differences. The researcher considered the following steps for corpora development and proceeded to the analysis.

1. The collected data was in pdf form. The researcher converted those 160 pdf files into Word files using an online converter tool named "I love pdf".
2. The researcher removed the title, author's basic information, publication information, header, footer, page no, headings, citations, images, graphs, tables, andreferences.
3. The researcher cut the text except for the sections abstract, discussions, and conclusions. Because these sections have the writer's opinions, writing style, and wording.
4. The researcher converted 160-word files into text files using an online tool named "word to txt". Because the UAM corpus tool function is in txt format.

Criteria for the development of corpora:

The data was selected based on the following points:

1. The data must be related to academic writing. It must be published researcharticles.
2. The research articles belong to the field of social sciences.
3. The research articles must be written by Pakistani and British research scholars.
4. The research articles must be published in 2019 and 2020.
5. The research articles must be 160 in total or more than that for its validation.
6. The Corpora consisted of more than 500000 words.

Research tool:

The quantitative approach was selected for this research. The data were analyzed through the UAM corpus tool. The UAM corpus tool played an important role in annotating the corpora. The UAM corpus tool took many steps from the newproject to the statistical table. A detailed description of the procedure of this tool is explained below.

1. In this step, the user clicks on the button "Extent corpora", and a window appears to select the location of the corpora of Txt files. All files have appeared as "Files in the corpus but not incorporated in the project". After that, click on the button "Incorporate all" the files that have appeared in "Files in the project", as this figure shows, where the txt files can be removed or added, and edited as well. This window was used to annotate each Txt file separately according to the layer.

2. The above window was used to add the layer. The layer functions as a scale of measure in the UAM corpus tool. By clicking on the button "Layer" next to the button "File", this window appeared. The window appeared by clicking on the button "Add layer", several windows appeared to set its name, type of analysis,and subtype selection respectively. This procedure leads to adding a layer, as the above figure shows.

3. The above window showed a platform where the scheme was added for analysis asthe present study focused on thematic analysis. The researcher added the scheme of theme and its types for the analysis procedure and to meet the purpose of this study.

4. The above window was used to show the text of each Txt file, where the procedure of annotation had been done. In this step, the highlighted segments have been annotated by double-clicking on the types under the heading of "TEXT". The selected types have appeared under the heading "Selected". This process goes ontill to the end. After the completion of the annotation of the whole text, the changes were saved.

5. The above window was used to set the rules for showing results.

6. The above window was used to show the results of the annotation. After selecting the feature coding, click on "Show" the results that appeared in the table form. The results were saved by clicking on the option, which lies on the left side of the table.The last option of the three was shown to save the results in HTML or other formats.

Validity of UAM corpus tool:

According to Voormam and Cut (2008), validity is related to annotation quality in a corpus-based investigation, not only on the primary data. The UAM corpus tool facilitates its users' annotation in various ways and on the same corpora. It is useful for comparative statistical

analysis as well. The process of encoding data by its developer according to contextual and textual information is called corpus annotation. The type of information that an annotator wants to gather is called a scheme. The number and type of scheme are dependent on the basic purpose of the investigation or research questions. In the present study, the researcher expected to investigate the theme's function. So, the researcher added a scheme of themes and their types as a scale of measurement for corpora analysis.

The procedure of annotation of the UAM corpus tool:

The corpora of 160 research articles written by Pakistani and British research scholars were analyzed through the UAM corpus tool, enabling users to annotate the samedata using different schemes or layers. The present study is related to the thematic analysis of academic writing. So, the researcher developed a scheme of themes and their types by combining the modals. These models were taken from "Introducing Functional Grammar" by Thompson (2014) and "Introduction to Functional Grammar" by Halliday revised by Matthiessen (2014).

Results and discussions:

The results were the consequences of thematic analysis of social science research articles written by Pakistani and British research scholars. The analysis was done quantitatively. The thematic analysis was done to discover the function of themes and their frequencies. The results of the corpus-based thematicanalysis are the following:

Table 4.1: *Corpus-Based Results of Pakistani and British Social Science Research Articles (2019 & 2020)*

	Pak-19		Pak-20		Bri-19		Bri-20	
Feature	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
TEXT	4515		4143		3029		1412	
Theme	1066	49.37%	1252	49.53%	1519	50.15%	1883	54.79%
Rheme	973	23.43%	996	23.49%	1014	23.57%	1331	24.05%
THEME TYPE	4515		4143		3029		1412	
Theme Status	985	21.82%	1481	22.25%	1456	21.73%	1238	28.67%
Theme Composition	81	1.79%	571	2.56%	63	1.89%	645	4.52%
THEME STATUS TYPE	4515		4143		3029		1412	
Topical Theme	985	21.82%	1481	22.25%	1456	21.76%	1238	28.67%
TOPICAL THEME TYPE	4515		4143		3029		1412	
Unmarked	607	13.44%	1102	13.11%	1138	12.91%	1006	17.04%
Marked	198	4.39%	171	4.13%	174	5.22%	95	6.65%
Enhanced	180	3.99%	208	5.02%	94	2.82%	137	5.17%
UNMARKED TYPE	4515		4143		3029		1412	
Subject	548	12.14%	1037	11.54%	1033	9.11%	968	6.78%
Wh	2	0.04%	1	0.02%	2	0.14%	2	0.14%
Predicator	57	1.26%	64	1.54%	153	4.59%	36	2.52%
SUBJECT TYPE	4515		4143		3029		1412	
Ng	548	12.14%	1037	11.54%	1033	9.11%	968	6.78%
WH TYPE	4515		4143		3029		1412	
Wh Subject	1	0.02%	0	0.00%	1	0.03%	1	0.07%
Wh Complement	1	0.02%	1	0.02%	0	0.00%	0	0.00%
Wh Adjunct	0	0.00%	0	0.00%	1	0.03%	1	0.07%
MARKED TYPE	4515		4143		3029		1412	
Adjunct	128	2.83%	102	1.98%	106	3.18%	39	2.73%
Complement	32	0.71%	31	0.75%	41	1.23%	12	0.84%

Dependent Clause	38	0.84%	38	0.92%	27	0.81%	44	3.08%
ENHANCED TYPE	4515		4143		3029		1412	
Predicated	109	2.41%	81	1.96%	1	0.03%	54	3.78%
Equative	47	1.14%	113	2.01%	53	1.59%	60	4.02%
Proposed	23	0.51%	14	0.34%	33	0.99%	16	1.12%
Existential	1	0.02%	0	0.00%	7	0.49%	7	0.49%
THEME COMPOSITION TYPE	4515		4143		3029		1412	
Multiple	81	1.79%	571	2.56%	63	1.89%	645	4.52%
MULTIPLE TYPE	4515		4143		3029		1412	
Interpersonal Theme	12	0.27%	15	0.36%	10	0.30%	9	0.63%
Textual Theme	69	1.53%	556	2.20%	53	1.59%	636	4.45%
INTERPERSONAL THEME TYPE	4515		4143		3029		1412	
Vocative	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Modal Adjunct	1	0.02%	0	0.00%	6	0.18%	2	0.14%
Finite	11	0.24%	15	0.36%	4	0.12%	7	0.49%
MODAL ADJUNCT TYPE	4515		4143		3029		1412	
Probability	1	0.02%	0	0.00%	0	0.00%	0	0.00%
Usuality	0	0.00%	0	0.00%	2	0.14%	1	0.07%
Typicality	0	0.00%	0	0.00%	7	0.49%	0	0.00%
Obviousness	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Opinion	0	0.00%	0	0.00%	2	0.14%	0	0.00%
Admission	0	0.00%	0	0.00%	7	0.49%	0	0.00%
Persuasion	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Entreaty	0	0.00%	0	0.00%	2	0.14%	0	0.00%
Presumption	0	0.00%	0	0.00%	7	0.49%	0	0.00%
Desirability	0	0.00%	0	0.00%	0	0.00%	1	0.07%
Reservation	0	0.00%	0	0.00%	2	0.14%	0	0.00%

Validation	0	0.00%	0	0.00%	7	0.49%	0	0.00%
Evaluation	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Prediction	0	0.00%	0	0.00%	2	0.14%	0	0.00%
TEXTUAL THEME TYPE	4515		4143		3029		1412	
Continuative	45	1.00%	521	2.11%	1	0.03%	0	0.00%
Conjunction Structural	7	0.16%	14	0.34%	35	1.05%	618	4.35%
Conjunctive Adjunct	17	0.38%	21	0.51%	17	0.51%	18	1.25%
CONJUNCTIVE ADJUNCT TYPE	4515		4143		3029		1412	
Appositive	0	0.00%	0	0.00%	0	0.00%	1	0.07%
Corrective	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Dismissive	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Summative	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Verificative	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Additive	0	0.00%	0	0.00%	1	0.03%	1	0.07%
Adversative	0	0.00%	2	0.05%	0	0.00%	0	0.00%
Variative	0	0.00%	0	0.00%	0	0.00%	2	0.14%
Temporal	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Comparative	0	0.00%	0	0.00%	0	0.00%	3	0.21%
Casual	1	0.02%	5	0.12%	4	0.12%	2	0.14%
Conditional	2	0.04%	1	0.02%	1	0.03%	1	0.07%
Concessive	0	0.00%	0	0.00%	0	0.00%	1	0.07%
Respective	14	0.31%	13	0.30%	11	0.33%	7	0.49%

Thematic Representation of Pakistani and British Social Science research articles:

It has been found that the writers of Pakistani and British social science research articles have used thematic devices more than rhyme. It has been clarified that theinvestigation of theme and rhyme is important as its results are expressed in the form of frequencies and percentages. The percentages and frequencies of theme and rhyme of Pakistani and British social science research articles are tabulated in the following table and a graph of interpretation that how the

theme percentages differ from each other.

The figure mentioned below represents the ratio of theme and rheme among all different data sections: Pak-19, Pak-20, Bri-19, and Bri-20. The figure represents that the writers of Pakistani social science research articles used more themes than rheme. Their usage of theme in their texts increased from 49.37% to 49.53%, but, on the other hand, their usage of rheme increased as well. Same as British research article writers do the same. Their usage of themes increased from 50.155 to 54.79%. The British writersconcentrated on a thematic organization to provide exact and cohesive meanings through their academic writing. On the other hand, Pakistani writers improved their academic writing slightly. The one aspect that is different among both types of writers that is Britishwriters use the English language as their L1, but Pakistani writers use the English language as L2.
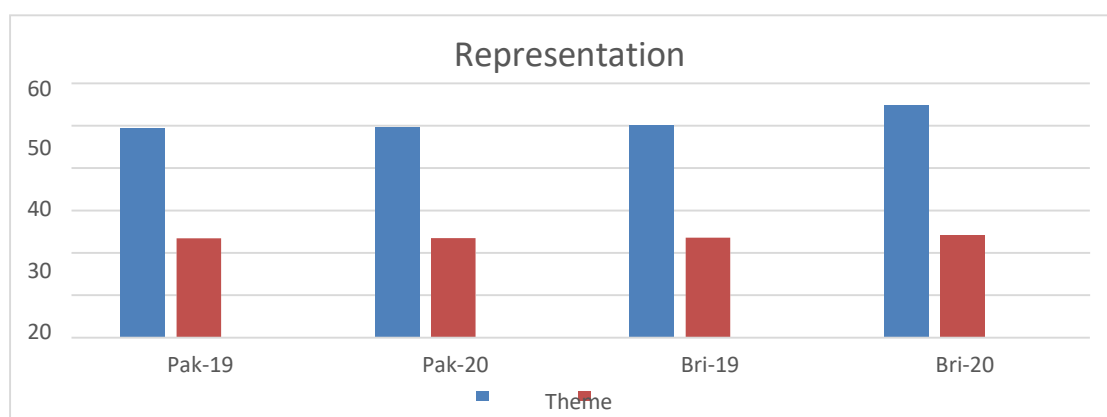
Figure 4.1: *Representation of theme and rheme*

Types of Themes' Representation:

The following table presents frequencies and percentages of different types of themes in different data sections. This table generally presents the distinction of theme types among different data sections. This distinction between Pakistani and British research articles between 2019 and 2020 has been cleared. The writers of these research articles mostly used topical theme, which comes under the heading of Theme Status. On the other hand, interpersonal and textual themes have been used less than topical themes: it is prominently clear from the following table. Both themes come under the heading of Theme Composition
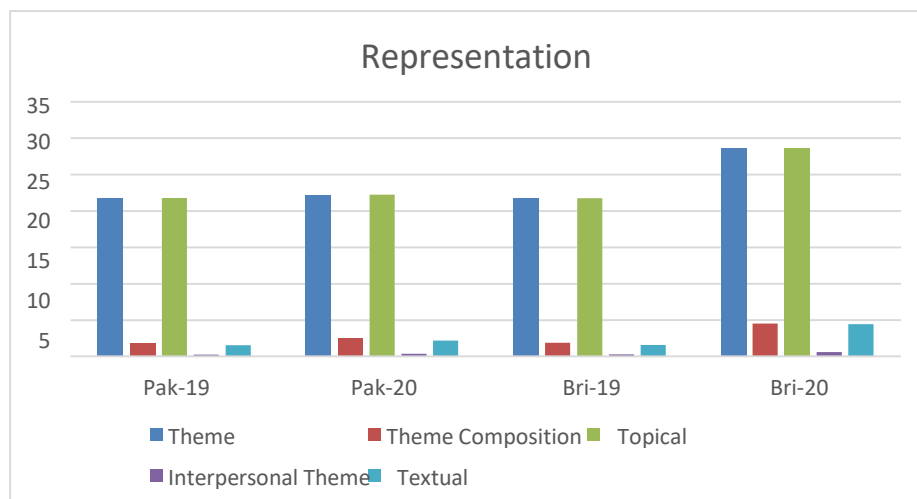
Figure 4.2*: Representation of Theme Types*

The above figure represents how the writers of research articles used different types of themes in their texts. It has been represented that topical theme is the most used type among all types of themes. The figure shows two identities frequently, that is theme status and topical theme. The topical theme comes under the heading of "Theme status".

Topical theme and its types' representation:

The thematic analysis of Pakistani and British research articles revealed thattopical theme is the most used type than interpersonal and textual. However, depth, an unmarked topical theme, is prominent among all research article writers.

It is presented that the whole text of Pak-19 contains 21.82% topical theme, and topical theme contains 13.44% Unmarked Topical theme, which is a prominent type of theme in this category of texts. It has been presented that the whole text of Pak-20 contains 22.25% topical theme, and topical theme contains 13.11% Unmarked Topical theme, which is a prominent type of theme in this category of texts.

It is presented that the whole text of Bri-19 contains 21.76% topical theme, and topical theme contains 12.9% Unmarked Topical theme, which is a prominent type of theme in this category of texts. It is presented that the whole text of Bri-20 contains 28.67% topical theme, and topical theme contains 17.04% Unmarked Topical theme, which is a prominent type of theme in this category of texts.
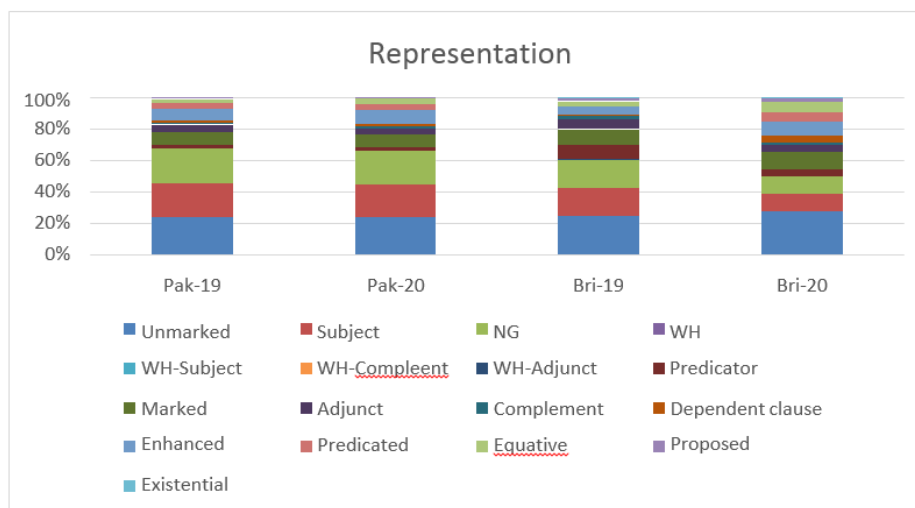
Figure 4.3*: Representation of Topical theme types*

Interpersonal theme, and its types of representation:

The thematic analysis of Pakistani and British research articles revealed that interpersonal theme type is used less among all themes. The texts of Pak-19 contain 0.27%, Pak-20 contains 0.36%, Bri-19 contains 0.30%, and Bri-20 contains 0.63% as well. In the case of interpersonal themes, finite has been found among all different data sections. The vocatives and modal adjuncts have been found less in all types of texts.

The percentage of finite in Pak-19 is 0.24%, Pak-20 is 0.36%, Bri-19 is 0.12%, and Bri-20 is 0.49%. The rest of the types means vocative and modal adjuncts have been used less than finite, but in the section of Bri-19 modal adjuncts have been found more than finite. This shows that the writers of Pakistani and British social science research articles used the interpersonal theme as well, but according to their need of conveying a message. The following figure clearly shows the representation of interpersonal theme types in all different data sections.
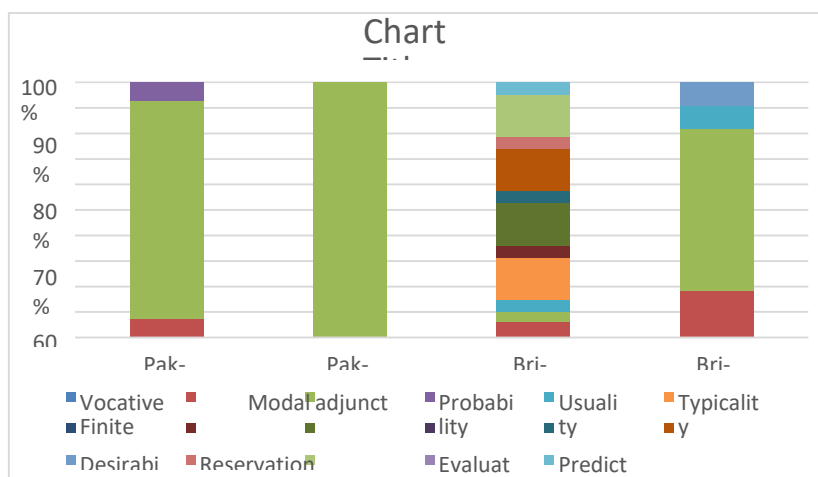

Figure 4.4*: Representation of Interpersonal theme types*

Textual theme and its types' representation:

The thematic analysis of Pakistani and British research articles has revealed that textual theme type has used less than the topical theme but more than the interpersonal theme. The texts of Pak-19 contain 1.53%, Pak-20 contains 2.20%, Bri-19 contains 1.59%, and Bri-20 contains 4.45% as well. In the case of types of textual theme, continuatives have been found the most type of textual theme in Pak-19 and Pak-20. On the other hand, conjunctions are the most common types of textual themes in Bri-19and Bri-20.

The percentage of continuatives in Pak-19 is 1.00%, and in Pak-20 is 2.11%. The percentage of continuatives in Bri-19 is 0.03%, and Bri-20 is 0.00%. On the other hand, the percentage of conjunctions in Pak-19 is 0.16%, and in Pak-20 is 0.34%. However, the percentage of conjunctions in Bri-19 is 1.05%, and in Bri-20 is 4.35%. The rest of the types means vocative and modal adjuncts have been used less than finite, but in the section of Bri- 19 modal adjuncts have been found more than finite. This shows that the writersof Pakistani and British social science research articles used the interpersonal theme as well, but according to their need to convey a message. The following figure shows the representation of interpersonal theme types in all different sections of data clearly.
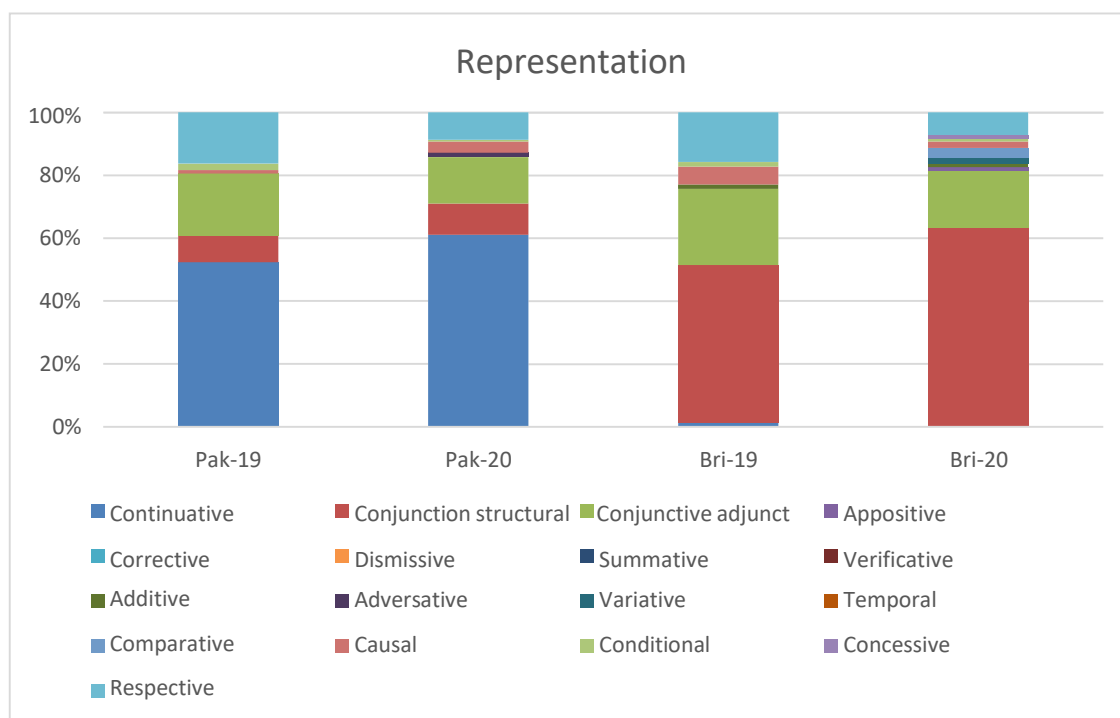

Figure 4.5*: Representation of Textual theme types*

What is the dominant type among all types of themes?

The dominant type of theme is the Topical theme in Pak-19, Pak-20, Bri-19, and Bri-20.

The following figure shows the level of topical theme in all different sections of data.
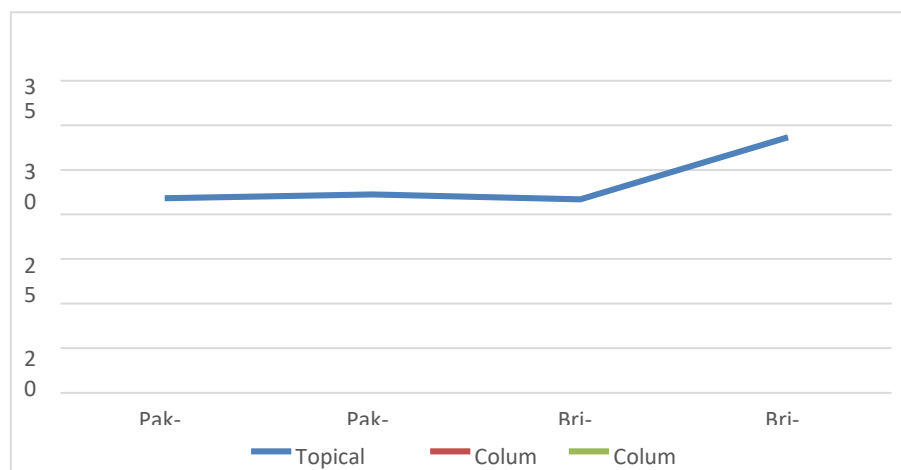

Figure 4.8*: Prominence of topical theme in sections of data.*

Different themes have been found in different locations, but according to the information. The inequality of percentages of theme types lies at various locations because of the information and different sections of data. The data is academic writing (Social science research articles). So, various types of themes have been found in the texts.

Unmarked topical themes have been significantly used in the research articles by Pakistani and British research scholars. Unmarked topical themes consist of a noun group, a noun complex group, and an embedded clause. As the writers write something about their investigation, they have used noun terminologies to mention something. This detail answers the following question.

What is the functional interpretation of the themes found in Pakistani and British social science research articles?

The most founded themes are the topical theme, unmarked topical theme, and various types. These terminologies function as a noun in the whole text. Apart from the text, the function of these devices remains the same. The researcher has also found nouns, noun complexes, and embedded or dependent clauses. So, the writers needed to use these devices to clear their information and convey a proper message to the readers. If the writers used another theme instead of these, they could not convey their message and meaning to the readers.

After the unmarked topical theme, the writers preferred to use a marked topical theme. Because marked topical themes contain prepositional phrases and adverbials that function as adjuncts or complements. The writers use these devices to start a new paragraph and wind up the information mentioned in the previous paragraphs.

The present study investigated theme-rheme patterns of social science research articles written

by Pakistani and British research scholars. The main focus of this study was to realize the meaning of the text. This research conducted two types of analysis: one was corpus-based analysis to find out frequencies and percentages of themes and their types, and the other was a qualitative analysis of the data. In qualitative analysis, the researcher analyzed the data through several steps, leading to thematic progression. The thematic progression has expressed the linkage of theme and rhyme within a text.This linkage realizes the meanings of the written texts. The whole text is concerned with the specific purpose. So, this detail answers the following question.

Conclusion:

It was revealed that the most prominent type of theme is thetopical theme and unmarked topical theme. It has also revealed that the interpersonal and textual theme has fewer percentages than the topical theme, but the textual theme is more used than the interpersonal theme. It is clear that unmarked topical themes play a role in the nominee's certain things, and textual themes function as a connector to show the linkage between new information and previous information. The unmarked topical theme functioned as noun groups and noun complex groups. The marked topical theme functioned as adverbial phrases and prepositional phrases. The interpersonal theme functioned as finite and modal adjuncts the most. The present research contributed to the theme-rheme analysis of the written text. This research provided valuable information, which can be used as a reference by researchers and educational practitioners. This study had an important implementation that can be used by English teachersto measure the written texts of students: whether their writing style is organized or not. For the students, this study provides many ways of theme implementation: they canuse these ways to improve their writing style and organize their text. The future researcher can use this study for their investigation but with different data and subjects.

References

Adebola, O. (2011). A textual analysis of selected text messages of males and females. Emerging Trends in Educational Research and Policy Studies (JETERAPS) 2 (4), 290-295.

Astuti, W. (2018, April). THEMATIC STRUCTURE OF SPORTS TEXTS INWASPADA NEWSPAPER. *In ALCLL: ANNUAL INTERNATIONAL CONFERENCE ON LANGUAGE AND LITERATURE* (Vol. 1, No. 1, pp. 87-92).

Damayanti, Yuanita (2016). Theme Equivalence and Theme Shift Found in Indonesian English Translation of Thesis Abstracts. Journal of Translation. Vol.1. No.2. 2016.

Davidse, K. (1987). MAK Halliday's functional grammar and the Prague school.

Ebrahimi, S. F., & Khedri, M. (2012). The Importance of Thematic Structure in Students' Writing Cohesion. *Language in India*, *12*(4).

Ezeifeka, C. R. (2016). Analysis of thematic prominence in selected Nigerian inaugural political speeches. *UJAH: Unizik Journal of Arts and Humanities*, *17*(2), 20-46.

Fahimnia, F. (2009), Analysis of the metafunctional theme in terms of Halliday's approach in primary school students" writings and Persian books, Ph.D. thesis, Humanities and Cultural Studies Institute.

Ghaleasadi, E. (2013). On Textual Theme in Reading Comprehension of English Romanticand Criminal Short Stories. *ELT Research Journal*, *2*(2), 51-61.

Halliday, M. A. K. & Matthiessen, C. M. (2014). *An introduction to functional grammar*. Routledge.

Halliday, M.A.K. (1994*). Functional Grammar*. 2nd Edition. London: Edward Arnold.

Hasan, R. (2015). Thematic Structure in the Arabic Translations of Edgar Allan Poe's The Black Cat, The Tell-Tale Heart, and Virginia Woolf's A Haunted House. *International journal of language and linguistics*. Vol.3(3): 132-139.

Jalilifar, A.R. & Khedri, M. (2011). Thematic development in English and translated academic text. In A.R. Jalilifar & E. Abdollahzadah (Eds.), *Academic research genre in Asian contex*t (pp. 335-364). Ahwaz: Shahid Chamran University Press.

Jing, W. E. I. (2013). Corpus-based research on the development of theme choices in Chinese learners' English speech. *Journal of Education and Practice*, *4*(16).

Kazemi, F. (2012), The theme and rheme in scientific Persian and English texts accordingto Halliday"s Functional Systematic Grammar theory, Ph.D. dissertation, Islamic Azad University, Science and Research Branch, Tehran.

Khedri, M., & Ebrahimi, S. F. (2012). The essence of thematic structures in the academic translated texts. *Journal of Education and Practice*, *3*(1).

Koutchadé, I. S. (2017). Exploring Textual Metafunction in Selected Nigerian News Reports: Linguistic Description and Interpretation. *Advances in Social Sciences Research Journal*, *4*(16).

Munir, S. (2022). *Thematic Analysis of Social Science Research Articles Written by Pakistani and British Research Scholars: A Corpus-Based Study*. Unpublished M Phil thesis submitted to Government College University, Faisalabad, Pakistan.

Nunan, D. (1993). *Introducing discourse analysis*. Penguin Group.

Nurlela, G., Sofyan, R., & Rosa, R. N. (2017). Theme Characteristics of Indonesian Narrative

Text. *An article to be presented at the Persidangan Antarabangsa Linguistik Bahasa Melayu 2017*, 16-17.

Paiva, K. S. F. M., & Lima, E. F. (2011). Systemic functional linguistics as a desirable approach to L2 writing evaluation: A case study. *Anais do VIII Seminário de Línguas Estrangeiras*, 1-12.

Puspa, V. M. (2016). THEME AND RHEME IN SHORT STORY OF THE TWELVE DANCING   PRINCESSES: A FUNCTIONAL GRAMMARAPPROACH *JURNAL BARISTA*, *3*(1), 49-63.

Stella, G., & Gunawan, S. (2017). AN ANALYSIS OF THEME AND RHEME USED INTHE FIVE-STAR HOTELS'WEB SITES IN SURABAYA. *K@ ta Kita*, *5*(1), 54-59.

Stoian, C. E., & Dejica, D. (2016). 2. Theme–Rheme Analysis of English and Romanian Tourism Websites. In *Language in the Digital Era. Challenges and Perspectives* (pp. 14-28). Sciendo Migration.

Thompson, G. (2013). *Introducing functional grammar*. Routledge.

Voormann, H., & Ulrike,G. (2008). Agile corpus creation. Corpus Linguistics and Linguistic Theory, 4(2), 235-251.

Wang, B. (2014). Theme in translation: A systemic functional linguistic perspective. *International Journal of Comparative Literature and Translation Studies*, *2*(4), 54-63.