Exploring Variation across Pakistani Academic Writing: A Multidimensional Analysis

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Abstract

Pakistani English as an indigenous variety exhibits variation at different levels of language. Previous quantitative studies on Pakistani English have identified its distinct characteristics on the basis of the occurrence of individual linguistic items and have played a pioneering role in the recognition of Pakistani English as an independent variety. However, these studies are limited in their scope as they depend on individual linguistic features and unrepresentative data. Biber (1988) developed multidimensional (MD) approach for register variation studies based on the co-occurrence of lexio-grammatical features. Biber (1988) disregarded the reliability of individual linguistic features for being subjective and misleading in exploring variation among registers and emphasized the importance of co-occurrence of linguistic features to distinguish among registers. The idea of co-occurrence structures the basis of multidimensional approach which proves to be the most suitable quantitative and comparative approach for register variation studies. The present research as one of the pioneer studies on register variation aims to explore Pakistani academic writing register through multidimensional analysis. A special purpose corpus of 8.385000 million words of Pakistani academic writing has been constructed for the present research. The corpus consists of 235 research dissertations of MPhil and PhD graduates and is further divided into categories of research sections. To explore the distinct identity of Pakistani academic writing as a register, the current research aims to explore linguistic variation among research sections on five textual dimensions of Biber's 1988 study. The findings of the study reveal Pakistani academic writing as highly informational, non-narrative, exceedingly explicit, non-persuasive and impersonal in style.

Keywords: Pakistani English, MD Analysis, register variation, academic writing

Introduction

Certain cultural and linguistic features have spawned distinct varieties of English across the globe. In this scenario Pakistani English (PE) has emerged as a non-native variety which exhibits variation at different levels of language. Researchers have shown escalating and burgeoning interest in its exclusive and unique features over the last two decades. Most of the studies have been conducted on lexical, phonological, morphological and syntactic aspects of Pakistani English where individual linguistic items from different texts have been

the focal point (e.g. Baumgardener, 1987, 1993, 1998; Mehboob, 2004; Mehmood 2009; Rehman, 2010; Talaat, 1993, 2002). These researches have contributed in the process of codification and recognition of Pakistani English as a legitimate variety. However, these studies prove to be of limited worth and scope as they rely on individual linguistic features and ignore the co-occurring patterns of linguistic features.

Pakistani English entails to be studied at the level of register for the further exploration of its unique features and to strengthen its distinct linguistic identity. A register is said to be a situationally defined variety of language and is characterized by particular situation, topic and purpose. With the concept of language variation, it has become utmost important to analyze linguistic patterns across registers in Pakistani English. So far only two register based studies (Shakir, 2013 and Ahmed & Mehmood, 2015) on the language of Pakistani print advertisements and press reportage respectively have been conducted through Multidimensional Analysis of Biber (1988). There is a need to study other registers of Pakistani English to strengthen its identity as a distinct variety.

Biber et al. (1999), Biber (2006), and Biber & Conrad (2009) consider academic prose "a very general *register*, characterized as written language that has been carefully produced and edited, addressed to a large number of readers who are separated in time and space from the author, and with the primary communicative purpose of presenting information about some topic" (Biber & Conrad 2009, p. 32). Academic writing like other registers in Pakistan is an area that still seeks the attention of the researchers and linguists. As for the learners, academic writing is the most important register on which their academic career depends. This target register needs to be fully described in terms of linguistic characteristics to develop appropriate teaching materials and methods.

Biber (1988) proposed Multidimensional (MD) analysis to explore variation among registers on the basis of co-occurrence of linguistic features. Biber established the fact that register variation studies based upon individual linguistic features instead of co-occurring features are subjective and can be misleading in nature. He regards multi-dimensional analysis as the most suitable alternative approach to investigating the linguistic variation which is corpus-based, quantitative, empirical and comparative in nature. So far, no register based study has been done on co-occurring linguistic features of Pakistani academic writing as a register. Therefore, the present research aims to explore linguistic variation across research sections, Introduction, Literature Review, Methodology, Results, and Conclusion of Pakistani academic writing register and investigates the following research question:

Q. How far is the language of Pakistani academic writing different across research sections on five textual dimensions of Biber's 1988 study?

Literature Review

As a distinct variety, Pakistani English has been studied from lexical, grammatical and phonological perspectives over the last many years. These studies have been mainly conducted from two different perspectives: occurrence of individual linguistic items in multiple texts and register based studies in terms of co-occurrence of linguistic features. Studies on the occurrence of individual linguistic items are divided into two types: manual and corpus based. Most of the studies concerned with the manual analysis of individual linguistic features, are mainly associated with lexical (e.g. Baumgardner, 1993a, 1993b, 1998; Mahboob, 2004; Rahman, 1990b, 1991; Talaat, 1993, 2002; Y. Kachru & Nelson, 2006) and phonological features of Pakistani English (Mahboob 2004; Rahman, 1990b). Taalat's (1993) study of lexical variation in PE, for example, looks at the semantic shift in certain lexical items as a shift from their original Standard British English usage to a so-called Urduised meaning. "Pakistani English is a non-native variety of English which uses all words available in Standard British English (StBrE) in a relational pattern" (Taalat, 2002).

The other studies on Pakistani English follow corpus based methodology. Mehmood, A. and Mehmood, R. (2009) are among the pioneers who conducted corpus based research on Pakistani English by comparing its distinctive features with British and American Englishes. Mahmood, R. (2009) studied the 'Lexico-Grammatical' aspects of the nouns and noun phrases in Pakistani English. Whereas, Mahmood, A. (2009) worked on multiple trends in Pakistani English through a corpus- based study and verified the legitimacy of previous claims made by the researchers working on Pakistani English. The researchers have tried to strengthen the distinct identity of Pakistani English through their work by highlighting the distinguishing features of Pakistani English. However, there is a need to study the distinguishing features of Pakistani English as an independent language beyond individual occurrences of lexical, phonological and grammatical features. Pakistani English so far is a less researched area and it needs to be studied at the level of register to further validate its distinct identity.

Only two register variation studies based on multidimensional analysis have been conducted on Pakistani English so far. These studies include: linguistic variation across advertisement in print media (Shakir, 2013) and linguistic variation across press reportage of Pakistani print media (Ahmed & Mehmood, 2015). Both studies employ multidimensional analysis to explore internal as well external variation. They stress the need for further register based studies on Pakistani English by disregarding the previous studies which relied on the frequency of individual linguistic features.

Need for More Register Based Studies in Pakistani English

The above mentioned brief review of Pakistani English reveals that there is a greater vacuum in the area of register based studies. This space calls for further investigations of co-occurring linguistic features at the lever of register. Thus the present research strives to add into the validation of Pakistani English as a legitimate variety by studying register based analysis of linguistic variation across Pakistani Academic writing.

Register Variation

Variation in language can be identified with reference to speakers, geographical areas, and situations. Variation in language in terms of situation of use refers to register variation. While differentiating the term 'register' from 'genre' Biber (2006) associates the term 'with a domain of use', whereas the other with cultural and conventional patterns. As being noted by Biber (2006), register studies focus on lexico-grammatical features in accordance with the situation of use; whereas, genre studies focus on socio-cultural and conventional aspects as how things are done. Biber refers to this situation as:

> A communication situation that recurs regularly in a society (in terms of participants, setting, communicative functions, and so forth) will tend to develop identifying markers of language structure and language use, different from the language of other communication situations. (1994, p. 43)

Language used in different registers belongs to different situations, different purposes, and different participants. Register variation is widely considered to be intrinsic to all cultures. Ferguson (1983, p. 154) emphasized the fact that "register variation in which language structure varies in accordance with the occasions of use, is all-pervasive in human language." Hymes argues that the analysis of register variation i.e. "Verbal repertoire" in his terms - should become the major focus of research within linguistics: "The abilities of individuals and the composite abilities of communities cannot be understood except by making Verbal repertoire, not language, the central scientific notion" (1984, p. 44).

Registers are different from dialects because they specifically serve different purposes, topics, and situations. They are different in both contents as well as form. Dialects are varieties according to geographical boundaries, whereas, registers are varieties according to situations. People use different contents and forms in different situations. Speakers do not typically "say the same thing" in conversation as in formal speeches, research articles, and class room lectures. The most important feature in a study of register variation is "a communication situation that recurs regularly in a society (in terms of participants, setting, communicative functions, and so forth) will tend over time to develop identifying

markers of language structure and language use, different from the language of other communication situations" (Biber, 1994, p. 48).

Register analysis involves three basic elements: the situational background, the linguistic features and the functional association between the two. Registers are characterized by particular lexico-grammatical features and are linked with the specific situational contexts and perform particular function. "Linguistic features are always functional when considered from a register perspective. That is, linguistic features tend to occur in a register because they are particularly well-suited to the purposes and situational context of the register" (Biber & Conrad, 2009). The figure given below illustrates the basic features of register analysis.
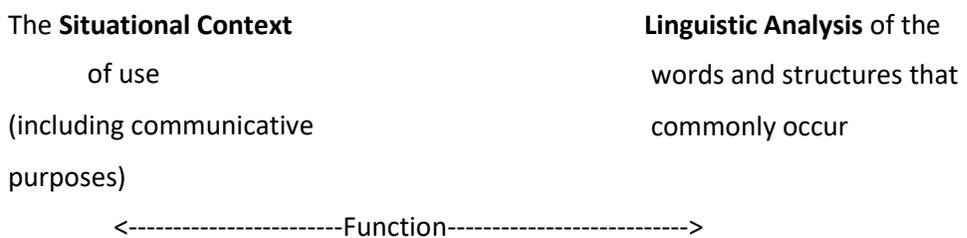
The **Situational Context**   **Linguistic Analysis** of the

of use   words and structures that

(including communicative   commonly occur

purposes)

<-----------------------Function-------------------------->

Figure1: Components in Register Analysis (adopted from Biber & Conrad 2009, p.6)

Multi-Dimensional Analysis and Register Variation Studies

Biber (1988) presented Multidimensional analysis for register variation studies in his influential work *Variation across Speech and Writing* in which he compared 23 spoken and written registers based on the co-occurrence patterns of prominent linguistic features in an empirical way. The importance of linguistic co-occurrence was recognized early on by linguists. For example, Brown and Fraser (1979, pp. 38–39) observe that it can be "misleading to concentrate on specific, isolated [linguistic] markers without taking into account systematic variations which involve the co-occurrence of sets of markers." Ervin-Tripp (1972) and Hymes (1984) identify "speech styles" as varieties that are defined by a shared set of co-occurring linguistic features.

By using computational techniques, multidimensional analysis focuses on the linguistic analysis of texts and text types and it undermines the analysis of individual linguistic features. Biber proposes that in carrying out linguistic analysis of a register, the extent to which linguistic features are used must be considered to identify the linguistic features that are pervasive and especially common in the target register. On the basis of this idea, MD approach focuses the fact that individual linguistic features cannot distinguish among registers; rather, sets of co-occurring features work together towards getting a shared a communicative goal.

On the basis of the functional interpretation of sets of co-occurring linguistic features with significant frequencies in texts, dimensions are identified and labeled. Biber (1988) made it clear that no single dimension can differentiate between spoken and written form of texts, rather multiple parameters of variation will be operative in any discourse domain. It is important to mention here that the co-occurring patterns underlying dimensions are identified quantitatively through statistical factor analysis. "When applied to linguistic data, factor analysis can therefore be used to identify sets of linguistic features that tend to co-occur across the texts of a corpus" (Grieve, 2010, p. 5).

Multi-dimensional approach of register variation synthesizes quantitative and qualitative functional methodological techniques. Qualitative analysis is required to interpret the functional bases underlying each set of co-occurring linguistic features; whereas, Quantitative analysis is concerned with the linguistic content of a dimension comprising a group of linguistic features to explain the quantitative linguistic patterns in functional terms.

The clusters of co-occurring linguistic features, derived through statistical factor analysis, can have both positive and negative loading. The positive and negative loading indicates the complimentary distribution of linguistic features which means the presence of one cluster marks the absence of other. However, on the basis of the shared communicative functions of the linguistic features on both positive and negative polarity, dimensions are formed and labeled. Biber (1988) explored five textual dimensions in his study on linguistic variation across speech and writing which are discussed below.

Dimension 1: Informational vs. Involved Production

The first dimension contains maximum number of linguistic features occurring on both positive and negative poles. The two poles on this dimension represent interactive and involved discourse (verbal) on positive side and highly informational discourse (carefully planned and edited) on negative side. Nouns, prepositional phrases, and, attributive adjectives are some of the features which occur on negative pole and mark density of information. The features with positive weight on this dimension are associated with 'highly constrained production circumstances' and include e.g. private verbs, first and second person pronoun, emphatics, hedges, modals of possibility, causative and conditional clauses as markers of involved and interactive text. Due to the shared function of the linguistic features on both positive and negative polarity, the dimension is labeled as 'Involved vs. Informational Production'.

Dimension 2: Narrative vs. Non Narrative Concerns

This dimension distinguishes between narrative and other types of discourse. The features with positive weight include past tense verbs, third person pronouns, and perfect aspect verbs as indicators of narrative action. The narrative discourse is

described to be "event oriented" whereas the non-narrative discourse is characterized as "expository, descriptive or other, marked by immediate time and attributive nominal elaboration" (Biber, 1988, p.109).

Dimension 3: Explicit vs. Situation Dependent Reference

The dimension 3 differentiates between explicit and situation dependent type of text. The features with positive loading on this dimension include 3 forms of relative clauses (Wh relative clauses on object and subject positions and pied piping constructions), phrasal coordination and nominalizations to exemplify explicit informational discourse. The time and place adverbials along with other adverbs are specific to situation dependent text.

Dimension 4: Overt Expression of Persuasion

The dimension 4 also labeled as Overt Expression of Argumentation has features with positive loading only. Infinitives, modals of prediction, persuasive verbs, conditional subordination, modals of necessity, split auxiliaries and modals of possibility work together to mark persuasion. Biber remarks: "this dimension marks the degree to which persuasion is marked overtly, whether overt making of the speaker's own point of view or an assessment of the advisability or likelihood of an event presented to persuade an event"(1988, P.111).

Dimension 5: Abstract vs. non Abstract Information

The dimension 5 is labeled as Abstract vs. non Abstract Information and represents informational discourse that is abstract and formal. The features with positive weight include conjuncts, agentless passives, adverbial past participial clauses, by-passives, past participial WHIS deletions, other adverbial subordinators and predicative adjectives. All these features indicate complex logical relations among the clauses. This dimension has also been labeled as 'impersonal vs. non-impersonal style' in later works.

Two types of Multidimensional analysis can be conducted: Old MD analysis based on the exploration of variation across texts on five textual dimensions (discussed above) of Biber's 1988 study and new MD analysis based on the new factor analysis of the data and formation of new dimensions. The present research employs old MD analysis and explores linguistic variation across Pakistani academic writing on five textual dimensions of Biber's 1988 study

Previous Studies on Pakistani Academic Writing

Pakistani academic writing is the least explored area so far. For example, the research work which represents Pakistani academic writing as a small part of general purpose corpora of Pakistani Written English (PWE) comes from Mehmoodians (2009). In PWE, Pakistani academic writing is represented by three sub-registers of text books, research articles and thesis and forms a part of general

purpose corpus. No distinct features of Pakistani academic writing have been studied in this research.

A recent research has been conducted by Asghar (2015) on the features of metadiscourse and contrastive rhetoric in Pakistani academic writing. The research is based on a small corpus consisted of 11 written texts, each comprising of 450 words at average. The research is an attempt to develop awareness about meta-discourse features in students' writings.

So far no register based study has been conducted on Pakistani academic writing. Therefore, the present research aims at exploring distinct features of Pakistani academic writing as a register.

Previous Studies on Research Sections in Academic Writing

Researchers have found significant differences among research sections of academic writing in the use of multiple linguistic features and that each section represents distinct co-occurring patterns. For example, Conrad (1996) investigated variation across research sections on five textual dimensions explored in Biber's 1988 study and found dimensional variation among all research sections. Getkham (2011) investigated co-occurring patterns of linguistic features of research articles of applied linguistics across sections by employing multidimensional analysis and explored new dimensions. Dimensional differences were found among research sections. Biber and Finegan (1994) also worked on the research sections of articles and compared the multidimensional profiles of the Introduction, Methods, Results, Discussion sections in medical research articles

Some other studies have examined the functions and types of hedges in different sections of research articles, in various languages and disciplines and in both soft and hard sciences (Crompton, 1997; Falahati, 2007; Getkham, 2010; Lin & Liou, 2006; Vassileva, 2001).Many other studies have identified the distribution of linguistic features across research sections. For example, Adam-Smith, 1984, on medicine; Butler, 1990 on Biology and physics; Hanania and Akhtar, (1985) on biology, chemistry and physics master's theses discovered more frequent use of modals in introduction and discussion sections as compared to other sections of research theses.

Materials and Methods

Collection of Data and Corpus Compilation

The first step in building a representative Corpus of Pakistani Academic Writing (COPAW) was to select disciplines that may represent a wide range of academic areas. Three major disciplines, Humanities, Sciences, and Social Sciences due to their importance in academics were then selected to study. The information was collected about the universities, where the selected disciplines were being offered. Initially, four universities, Bahauddin Zakariya University, Multan University of Sargodha, Govt. College University Faisalabad, and Fatima Jinnah

Women University were selected for the collection of research theses of MPhil and PhD graduates for corpus compilation. Due to the apprehensive behavior of chairs of different departments and librarians, controller examinations in the selected disciplines, the researchers decided to download theses from Higher Education Commission (HEC) Research Repository. After getting 135 theses of MPhil graduates from the above cited universities, the researchers downloaded 100 PhD theses in the selected disciplines from Higher Education Commission (HEC) Research Repository. The other universities include Government College University, Faisalabad, International Islamic University, Islamabad, Lahore College for Women University, National University of Modern Languages, Quaid-i-Azam University, Shah Abdul Latif University of Khairpur, University of Agriculture, University of Karachi, University of Peshawar, and University of Punjab. The research theses represent a wide array of subjects in Humanities, Social Sciences, and Sciences. 235 theses in total were finally collected to build up a corpus of Pakistani academic writings. Each thesis was further divided into research sections as sub-categories and was duly coded. Finally, a corpus of 8.385000 million words compiled of 1175 text files was ready for further data analysis process. Following table describes the categories of Pakistani Academic writing to be studied in the present research.

Table 1: Sub-Categories of Pakistani Academic Writing

Sr. No	Sub-Categories of Pakistani Academic Writing	Codes
1	Introduction	Int
2	Literature Review	Lit
3	Research Methodology	Met
4	Results	Res
5	Conclusion	Con

The table shows Pakistani academic writing was divided into five major categories to build up a special purpose corpus and to explore linguistic variation across these categories. As far the situational characteristics of the research sections, Introduction is concerned with introducing the rationale and objectives of the study. Literature Review presents a detailed account of previous related studies, whereas, research Methodology focuses on the account of materials and methods taken in the research study. The section on Results is concerned with the findings of the study, while Conclusion reports summary and suggests future implications.

Data Analysis

Data analysis in the present research is carried out through three important steps which include: tagging of data for linguistic features, attaining counts of linguistic features, turning raw frequencies into normalized scores and calculation of dimensions scores. All these steps are discussed below in detail.

Tagging of the Corpus

The corpus of Pakistani academic writing was tagged by Jesse Egbert by employing Biber's tagger for all the linguistic features used in 88 MD Analysis on five textual dimensions. The list of linguistic features relevant in 1988 study is given in (Appendix II).

Computing Raw Counts of Linguistic Features and converting into Normalized Frequencies

Biber's tag count program was used for the raw counts of the frequencies of different linguistic features and normalized frequencies. The raw frequencies of linguistic features were obtained from all texts (1175) and computed out of 1000 words. "A comparison of non-normalized counts will give an inaccurate assessment of the frequency distribution in texts" (Biber, 1988, p.75). This standard was set by Biber in his 1988 study on the basis of the formula: actual frequency divided by total number of words, multiplied by 1000.

Calculation of Dimension Scores

The dimension score of each text of Pakistani academic writing was calculated by subtracting the standardized scores of negative features from the sum of standardized scores of positive features. The dimensions with no negative features include only sum of positive scores of linguistic features. In this way, dimension score of each text in 1988 MD analysis of Pakistani academic writing was calculated.

Results

The table given below presents an analysis of variance (ANOVA) results to indicate the statistically significant differences among research sections of Pakistani academic writing.

Table: 2 Analysis of Variance Table for Variation among Research Sections on Five Textual Dimensions of 1988 MD Analysis

Dimension x Research Sections interaction mean±SE

Dimension	Categories					
	Introduction	Literature Review	Methodology	Results	Conclusion	Mean
D1	-22.01±0.28E	-23.23±0.28E	-24.33±0.30D	-23.17±0.38E	-22.78±0.33D	-23.104
D2	-3.29±0.06C	-2.60±0.06C	-3.41±0.06C	-3.45±0.08C	-2.88±0.08C	-3.126

D3	8.78±0.17A	8.69±0.14A	7.49±0.19A	6.57±0.15A	7.82±0.17A	7.87
D4	-3.89±0.08D	-4.07±0.08D	-3.91±0.12C	-4.79±0.10D	-3.24±0.14C	-3.98
D5	3.12±0.13B	3.65±0.13B	5.85±0.20B	2.53±0.17B	4.37±0.22B	3.904

Means sharing similar letter in a row or in a column are statistically non-significant (P>0.05). Capital letters are used for overall mean.

The table reveals that there lies statistically significant differences among research sections of Pakistani academic writing on D1, D4; whereas no statistical significant differences among research sections on D2, D3 and D5 were observed. Pair wise comparison reveals that methodology and conclusion are significantly different from other research sections.

Discussion on Variation among Research Sections in Pakistani Academic Writing on Biber's 1988 Textual Dimensions

Variation among research sections in Pakistani academic writing on Biber's 1988 set of textual dimensions is being discussed as under.

Variation among Research Sections on D1

On D1 Pakistani academic writing has been manifested highly informational and integrated. Figure 2 given below exhibits comparison among research sections of Pakistani academic writing on D1 of Biber's 1988 study.
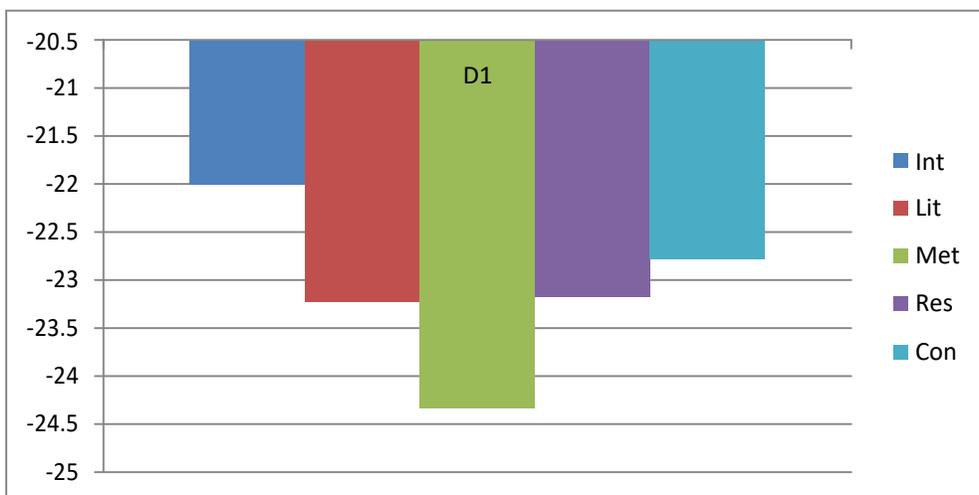

Figure 2: Comparison of Research Sections on D1

Figure 2 compares the mean dimension score of research sections on D1 and displays that all research sections in Pakistani academic writing have been found highly informational rather than interactive and involved. Among all, the section on Methodology has been revealed to be the most informational by having the highest mean score (-4.33), whereas, Introduction with mean score of -22.01 has

been found to be the least informational and more inclined towards interactive and involved pattern of discourse on D1.

The sections on Literature Review and Results are found to have almost similar degree of informational package with mean score of -23.23 and -23.17 respectively. The section on Conclusion has mean score of -22.78 and is slightly more informational and less interactive than Introduction. The less informational stance of Introduction and Conclusion indicates the interactive style of Pakistani academic writing in the presentation of the rationale of the study and in summarizing the findings respectively. The differences among the research sections can further be explored by looking into the distribution of features of informational discourse across research sections.

The presence of all major informational linguistic features (nouns, prepositions, attributive adjectives) in all research sections is shown in the figure given below, which displays the distribution of informational linguistic features across research sections of Pakistani academic writing on D1 of Biber's 1988 study .
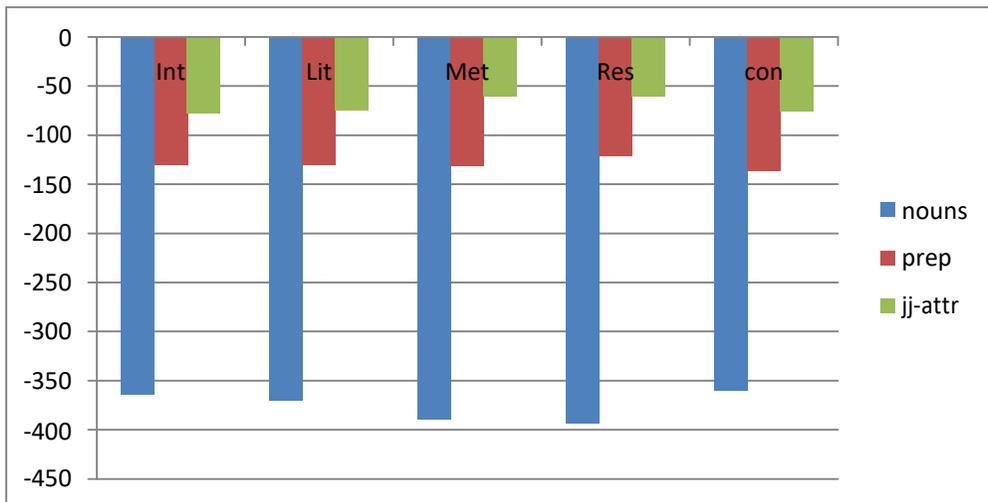

Figure 3: Comparison of Informational Features on D1

Figure 3 compares the grammatical features among five research sections of Pakistani academic writing on D1 and reveals that Pakistani academic writing is highly characterized by the density of nouns in all research sections. Leech (1966) and Pop (2007) along with many other researchers recognize that providing information is one of the major functions of nouns. Moreover, the whole nominal group contains three important constituents of informational discourse, i.e. attributive adjectives, nouns and prepositions. It is noticeable that the Result section uses the highest frequency of nouns with the mean score of -392.78 which clearly shows the concern of this section with the description of objects and entities more than any other research section. However, Methodology section is characterized by slightly less use of nouns (with mean score of -384.924) as

compared to the section on Results. The section on Introduction is shown to be using the highest frequency of attributive adjectives with mean score of -77.50805 and is revealed to be associated with more elaborated informational discourse.

Overall, Methodology has been found the most informational section with the highest accumulative mean score (-192.234) on the informational features. The sections on Literature Review and Results are next to Methodology in using informational features with -191.782and -191.364 mean score respectively. Prepositions (-128.9913) have been shown at the highest frequency rate in Conclusion, and add into clarity of informational stance of this section. The example given below is packed with extensive information crowded with the density of nouns, preposition and attributive adjectives in Pakistani academic writing.

Example 1: After completing **the data collection, data** was analyzed **by** using **PC in computer laboratory**. The **analysis** has been taken **in two ways**.

1- Univarient analysis has been taken with the help of simple tabular analysis based **on percentages, frequencies and bar charts.**

2- **Bivarient analysis** has been taken **with the help of cross tabular analysis** based **on association between the percentages and frequencies of different variables. (**Text 99, 3, SS)

The example exhibits the density of nouns, prepositions and attributive adjectives and is highly informational, where the author is informing the reader about the ways of data analysis.

The trends of Pakistani academic writing on D1 have been found to share high degree of information and knowledge based discourse with the reader. This trend seems to be in accordance with the situational characteristics of thesis writing, as research is a systematic effort to add new knowledge. Its major purpose is to contribute new knowledge through careful investigation or inquiry in the related field and to enhance the understanding of the readers about the topic being explored or discussed.

For the differences among research sections, presentation of explicit information may be related to the purpose of different research sections and expected readers. Introduction is found least informational and more interactive due to its objective of making readers understand the rationale of the study. In presenting extensive information of the procedures taken in conducting research, the section on Methodology seems to expect readers with wide background knowledge.

The results on D1 are quite similar to Conrad (1996), on the section on Methodology being the most informational among all research sections in both studies; however, they are different on the least informational sections. Contrary

to Conrad (1996), in which the section on Results is found to be the least informational, Introduction is revealed to be the least informational and most interactive section in Pakistani academic writing.

The foregoing discussion, based on the mean dimension scores and individual linguistic features along with example from Methodology section, provide sufficient evidence to the claim that Pakistani academic writing on D1 is highly informational and integrated.

Variation among Research Sections on D2

On D2 Pakistani academic writing appears to use non-narrative discourse. Figure 4 given below compares all the five research section of Pakistani academic writing and shows that all the research sections have negative mean scores along D2.
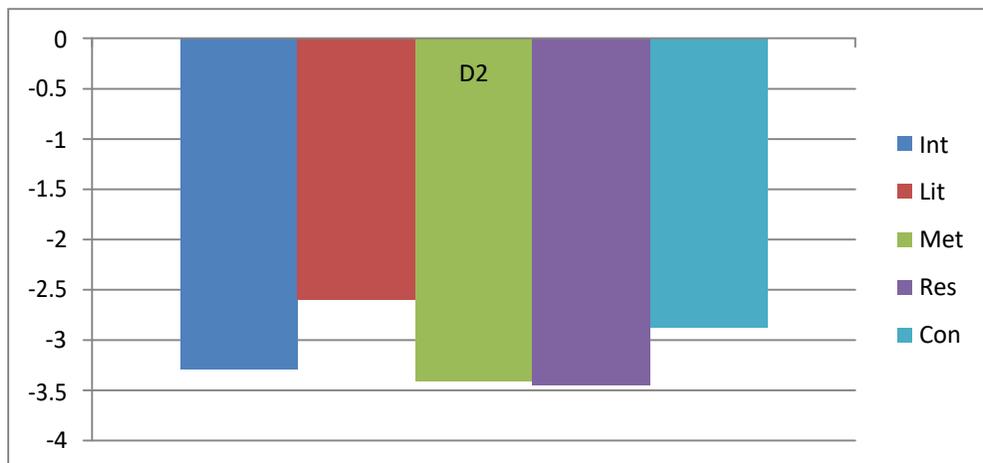

Figure 4: Comparison of Research Sections on D2

Figure 4 exhibits that Pakistani academic writing is characterized by highly non-narrative concerns. Pakistani academic writing is revealed to be is expository, explanatory and descriptive rather than 'event oriented'. However, there are differences in the research sections in the degree to which they have been found non narrative in discourse. The section on Results has been justifiably found the most expository and descriptive one with the highest mean score of -3.4. This clearly speaks of the fundamental concern of this section with the presentation of the procedural information about the findings of the study. With a slight difference of the mean score is found the section on Methodology (-3.41) in maintaining expository and non-narrative manners in the production of academic discourse. Comparatively less descriptive and more narrative sections are Conclusion and Literature Review with mean scores -2.88 and -2.60 respectively. That indicates that Literature Review with minimum scores has more potential for including narrative elements, obviously due to references to past researches.

These non-narrative concerns have been discussed by many researchers including Biber, 1988, 2010; Biber & Conrad, 2009; Connor & Upton, 2003, 2004. Connor and Upton (2004) describe these non-narrative concerns as:

> These non-narrative purposes include (1) the presentation of expository information, which has few verbs and few animate referents; (2) the presentation of procedural information, which uses many imperatives and infinitive verb forms to give step by step description of what to do, and (3) description of actions usually in progress, that is, actions in the present tense, a straightforward and concise packaging of information. (p.249)

The differences among the research sections can be further viewed in relation to the presence of the features representing non narrative discourse.

Example 2: The studied ground waters **are usua**lly basic in nature, **have** high EC due to elevated levels of TDS, **reflecting** moderate mineral dissolution. The intensity of soluble minerals **is expressed** as saturation index. In understudy groundwater samples, the saturation index (SI) of calcite **has shown** significant correlation. The positive correlation of SI of calcite with Ca2+, SI of dolomite with Mg2+, while Ca2+ and SO42- **corresponds** with SI of gypsum (Fig. 5 c-f**), indicate** that, these minerals **are in** a state of under saturation in ground water. The SI **results may be attributed** to extensive **water logging of study area and is promoting** contamination. (Text 188, S)

The example above shows Pakistani academic writing as highly non-narrative and gives the presentation of expository information, which has present tense verbs, description of actions usually in progress, that is, actions in the present tense, a straightforward and concise packaging of information.

The trends shown on D2 seem to be justified and can be related to the basic purposes of different research sections. The sections on Results and Methodology have been found the most non narrative among all, as the Results aim to present the findings of the ongoing study and Methodology section takes up the purpose of presenting the steps and procedures involved in the ongoing study. Therefore, both are non-narrative for being least concerned with historical references. The section on Literature Review has been found least non-narrative due to its purpose of providing detailed insights into the past relevant researches. The section on Conclusion aims to summarize the findings of the study, and is comparatively inclined towards narrative discourse.

The results on D2 can be compared with Conrad's (1996) findings on variation among research sections. In both studies, non-narrative patterns of discourse are observed with variation in the extent to which they conform to the norm of non-narrative discourse. In Pakistani academic writing the section on Methodology has been found the most non-narrative; whereas, in Conrad's study

(1996) of research articles Introduction is revealed to be the most non-narrative section.

Over all, Pakistani academic writing on Biber's second dimension of 1988 study has been revealed non-narrative with variation in the trends of different research sections as per their purposes.

Variation among Research Sections on D3

On D3 Pakistani academic writing has been revealed highly explicit and elaborated. Figure 5 below depicts comparison among all the research sections in terms of mean dimensional scores.
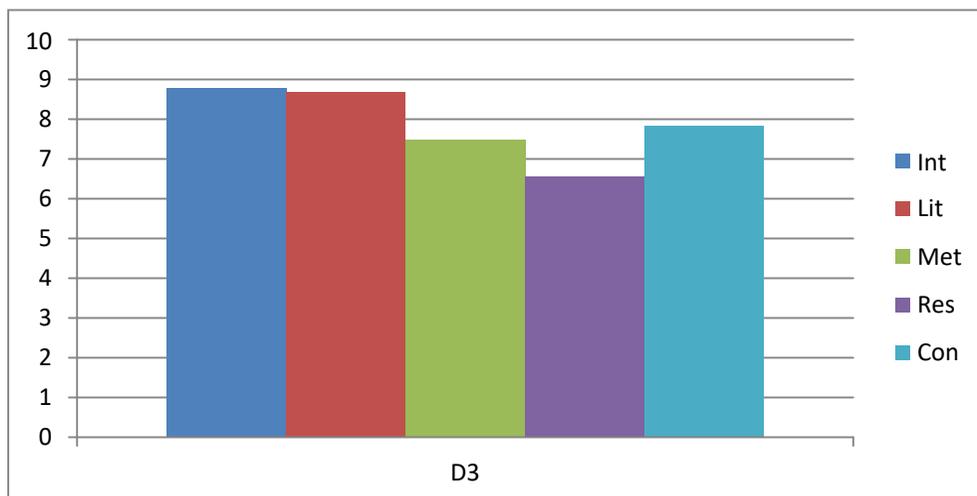

Figure 5: Comparison among Research Sections on D3

Figure 5 reveals that all the research sections of Pakistani academic writing have positive mean score on D3 and are characterized by referentially explicit and overt discourse. Introduction has been revealed as the most explicit section among all with mean score of 8.78. The explicitness in Introduction clearly speaks of clarity and openness of rationale and objectives. Next to Introduction is the section on Literature Review with mean score of 8.69 in maintaining explicit and overt discourse. The sections on Conclusion and Methodology have been shown less explicit than the first two sections in having mean scores 7.82 and 7.49 respectively. The section on Results with mean score 6.57 has been found least explicit among all. The variation among research sections of Pakistani academic writing can be further viewed in terms of the distribution of the some of the linguistic features representing explicit discourse. Figure exhibits the features of explicit discourse across research sections of Pakistani academic writing on D3.
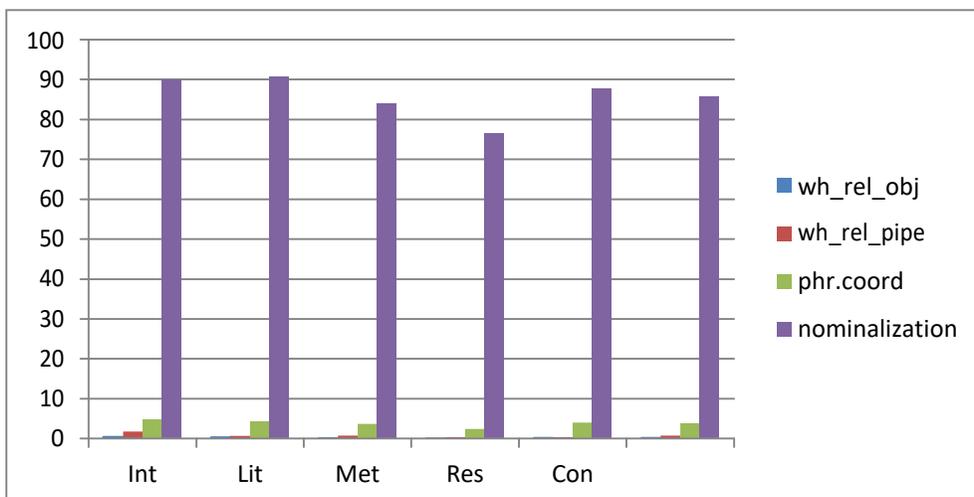
Figure 6: Features of Explicitness on D3

Figure 6 shows that all the research sections use all the linguistic features of explicit discourse. The features of explicitness include: Wh relative clauses on object position Wh relative clauses on subject position, pied piping constructions, phrasal coordination and nominalization. The highest mean score 85.7755 is achieved by nominalization in all research sections that indicate nominalization as mainly responsible for explicitness in Pakistani academic writing. The frequency of nominalization has been found many times greater in all research sections than other linguistic features on this dimension. Nominalization is generally used to refer larger issues. In the present research, nominalization is found to be most frequently occurring in the section on Literature Review (90.75277). This shows that literature review is extensively marked by the description of related issues. However, the section on Introduction has been found the most explicit one and is devoted to more explanatory and elaborated discourse by using the maximum frequency of relative clauses (1.7908).

The trend of using nominalization is common in academic writing register. Conrad (1996) also found density of nominalization ranging from mean score 100 to 32 in all research sections. The features other than nominalizations are found to be at the lowest end in all research sections in the mean score of their normalized frequency. As in the current study, all Wh clauses along with coordinating phrases have the mean score of 1.8462. Wh clauses are used for referential purposes and add further details and openness into the explicitness of Pakistani academic discourse. Introduction is the most explicit research section in Pakistani academic writing with the highest mean score due to the density of all linguistic features of explicitness. The following example from the corpus of Pakistani academic writing indicates the frequent use of nominalization.

Example 3: Capital **intensity,** profit **intensity**, age and size of the firm are in negative **relation** to energy **intensity**. So the above **discussion** shows energy **intensity** and other variables have one-way **relationship**. The results of the **regression** have been given in following table. The **estimation** of the **regression equation** from the period 2005 to 2010 is based on an unbalanced panel data. The **regression equation** has been estimated by using STATA 10. Table 4.4 summarizes the **regression** results and showing the **relationship** between energy **intensity** and its **determinants.** (Text 159, 4, SS)

The example given above shows how greatly Pakistani academic writing relies on nominalization. This example is taken from the section on Results which has the minimum mean score on nominalization. The differences among research sections on D3 can be attributed to situational characteristics of academic writing. The reason which can be attributed to Introduction for being the most explicit and elaborated is that at this very stage, the readers have minimum knowledge about the topic, so more explanations of concepts and terms are needed for clarity. This stance is strengthened by the most frequent presence of Wh relative clauses, as they have the highest mean score on this section. Wh clauses help out in giving elaborated information as "they facilitate the packing of information into complex noun phrase" (Conrad, 1996, p.184). Literature Review with the mean score 8.69 is slightly less explicit than introduction. The section on Results is least elaborated and explicit. That clearly shows the results are more exact, less elaborated and relatively concerned with situation dependent reference.

However, the differences in research sections in the degree of explicitness can be related to the differences in purposes in writing different sections. The Methodology and Results sections are least explicit as they are more concerned with procedures and evidence. According to Conrad, (1996, p.188), "the reporting of procedures and evidence correspond with few nominalization and more place and time adverbials." The findings on this dimension are bit different from Conrad (1996) on variation among research sections.

Variation among Research Sections on D4

The ANOVA results indicate that there lie statistically significant linguistic differences among research sections on D4. Pair wise comparison shows that Methodology and Conclusion are significantly different from other research sections.
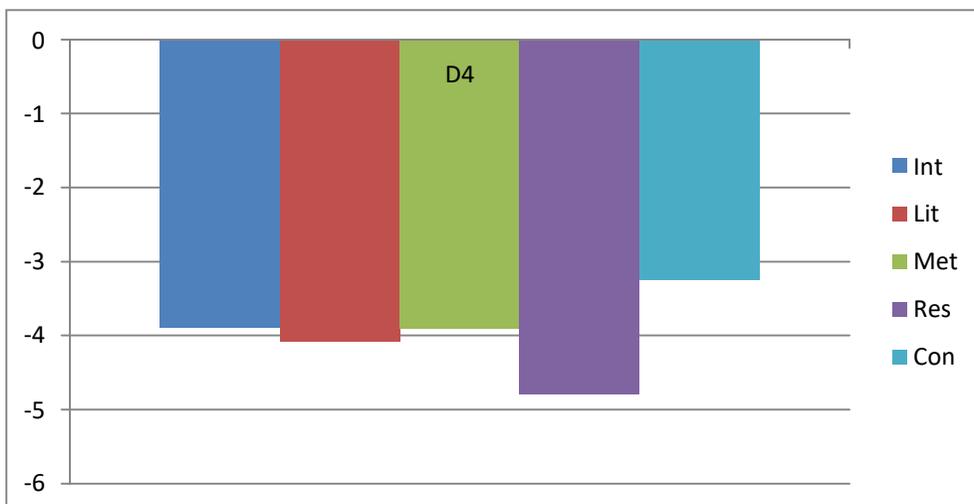
Figure 7: Comparison among Research Sections on D4

Figure 7 shows that Pakistani academic writing is marked with the absence of persuasive expression and has been found least argumentative. The figure compares the degree of persuasiveness among research sections and reveals that the section on Results has been most prominently marked by the absence of writer's point of view and found least persuasive with the mean scores of -4.79. This trend shows the objective style of Pakistani academic writing in the presentation of findings. Next to the Results is the section on Literature Review which is marked by less non persuasive stance with the mean score of -4.07. The section on Conclusion is inclined towards the persuasive style when compared with other sections as having the lowest mean score of -3.24.

The findings on D4 are similar to Conrad (1996) on the section of Results for being the most non-persuasive section among all. However, they are different on sections with the least non persuasive style as in Conrad, the section on Introduction is found to be the least non-persuasive.

The trends shown in different sections of Pakistani academic writing on this dimension are highly related to the purposes of different sections. The section on Result reports the findings of the research in factual, non-persuasive style, thus lacks overt expression of argumentation of the writer. The section on Conclusion presents the summary of the reported research and recommends future researches and pedagogical implementations, becoming slightly suggestive and purposive in stance.

Overall, Pakistani academic writing is marked by non-persuasive style characterized by the lack of linguistic features such as –prediction and necessity modals, persuasive verbs and conditional subordination which seek judgmental advisability or likelihood of the event to persuade the reader. These findings are quite unlike of the academic writing as shown in many of the previous researches.

As thesis writing is characterized by the presentation of new knowledge, it is of utmost importance that the authors should support their claims. In the case of Pakistani academic writing it is clear that arguments are least made for the overt expression of persuasion. However, the differences may be related to the purposes associated with different research sections.

Variation among Research Sections on D5

On D5 Pakistani academic writing has been found highly impersonal and detached. The results presented in table 2 indicate that there lies no statistical significant variation among research sections on D5. Figure 8 draws a comparison among the research sections on D5.
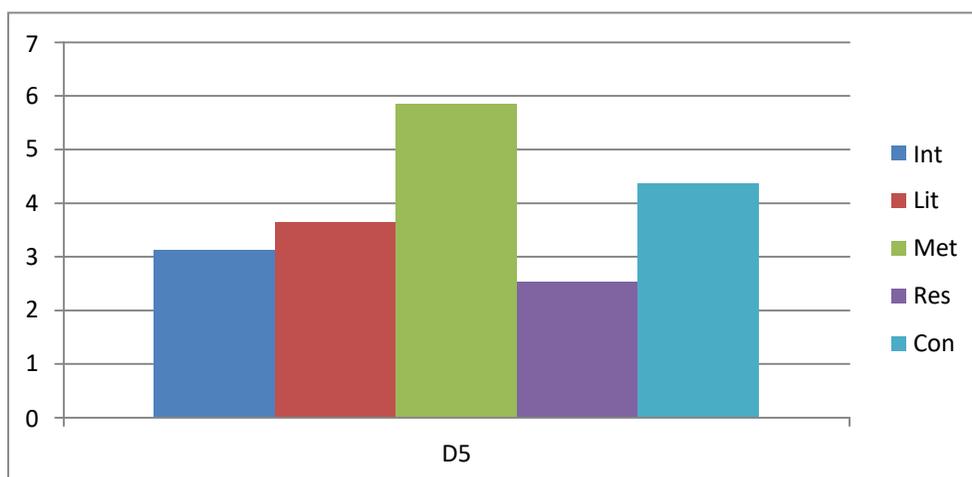

Figure 8: Comparison among Research Sections on D5

The comparison reveals that among all, the section on Methodology has been found the most abstract and impersonal with the highest positive mean score of 5.85. The section on Conclusion with the mean score of 4.37 has been revealed next to the section on Methodology in the production of impersonal discourse. The sections on Introduction and Literature Review have mean score of 3.12 and 3.65 respectively on this dimension and have been shown less impersonal than Methodology and Conclusion. Surprisingly, the least impersonal and more personal section is the section on Result with mean score of 2.53 on D5 of 1988 study.

The figure below depicts the clear picture of the presence of the linguistic features of impersonal expression across research sections.
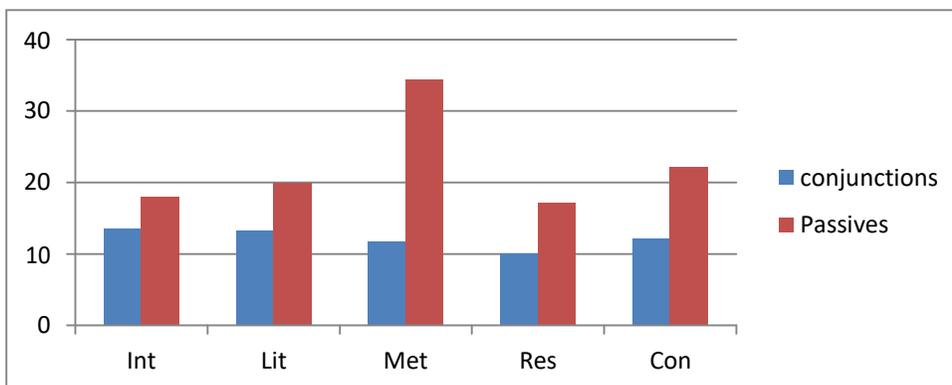
Figure 9: Comparison of the Linguistic Features of Impersonal Expression on D5

Figure 9 compares the density of conjunctions and passives in research sections of Pakistani academic writing and reveals that passives with the highest mean scores of 34.42809 are most frequently occurring in the section on Methodology, thus making it the most abstract and theoretical section among all. Conjunctions, however, are found at the highest frequency rate (13.5911) in the section on Introduction and function to add cohesion in Pakistani academic discourse. This shows that Introduction is the most cohesive among all sections. The section on Results has the lowest frequency rate of passives (17.16766) as well as conjunctions (10.14851) which indicates that the section on Results is the least impersonal among all.

The following example from Methodology section clearly reveals density of passives and conjunctions.

Example 5: Unit root test, Johansen co-integration technique **and** Vector error correction methods **had been used** to measure the correlation **between** public **and** private investment and to empirically test the accelerator and neoclassical theories of investment in Pakistan's context. Unit root **test was applied** to check the stationarities of the data. Co-integration **approach had been used** to find out long run results of the model. Error **correction model was employed** to get both long **and** short run results of the data. Unit root **test is used** to check **whether** the time series data is stationary or non-stationary by applying an autoregressive model. To obtain reliable results, **data must be stationary**. (Text 81, SS)

These results indicate Pakistani academic writing as highly conceptual, theoretical and abstract in the production of Methodology section and slightly less conceptual and intangible in the section on Conclusion. The results are slightly different from Conrad (1996) on this dimension. Though all the research sections in Conrad are found to be impersonal, the section on Discussion is revealed to be the most impersonal. In Conrad, Introduction has been found least impersonal, whereas, in Pakistani academic writing, the section on Results has been found least impersonal.

The situational analysis leads to the fact that the purpose of Methodology section is to give accounts of procedures involved in taking up the research. The procedures are generally written in passive constructions. Conclusions summarize the reported research and are often written in passive voice to make connections with the work carried upon, thus becoming impersonal in style.

Conclusion and Future Recommendations

The foregoing discussion on the linguistic variation across research sections of Pakistani academic writing on Biber's 1988 five textual dimensions reveals interesting results on all the five dimensions:

On D1, Pakistani academic writing has been found highly informational which is justified as per norms and major purpose of academic writing. However, certain variations among research sections have been revealed. The section on Methodology has been found the most informational, whereas, the section on Introduction is found to be the least informational and more inclined towards interactive discourse which is true to the purpose and expected readers of these two research sections. On D2, Pakistani academic writing has been justifiably found to have highly non-narrative discourse. The section on Results being based on the presentation of the findings is revealed to be the most non-narrative section; whereas, Literature Review, as per purpose of this very section has been found least non-narrative in the presentation of the review of previous related studies. On D3, Pakistani academic writing has been found to rely on referentially explicit and overt discourse. The most explicit section among all is the section on Introduction with clarity and openness of the rationale of study. The section on Results is found to be the least explicit of all the five research sections.

On D4, Pakistani academic writing is found to lack overt expression of persuasion that indicates its non-argumentative style in the presentation of information. The section on Results has been found the most non-persuasive in discourse, thus highly lacking in argumentative stance; whereas, the section on Conclusion has been revealed least non-persuasive in style. On D5, Pakistani academic writing has shown impersonal and detached style in the production of academic discourse. The section on Methodology has been found to be the most impersonal section among all. Surprisingly, the section on Results which has been marked with least argumentative discourse has been found least impersonal in style.

On further exploration of linguistic features, Pakistani academic writing has been marked with the dense presence of nouns, present verbs, nominalizations, passives and conjunctions. Categorically mentioning, the findings of the present study show the fact that Pakistani academic writing is characterized by highly informational, non-narrative, explicit, non-persuasive and highly impersonal discourse. Moreover, the dense presence of distinct linguistic features speaks of the distinct existence of Pakistani academic writing register with its own norms.

The results of the present study will prove to be a valuable source of information to the future researchers, syllabus designers, ESP practitioners and lexicographers. The results of the present study may be taken as norms of Pakistani academic writing and may be compared with other registers of Pakistani English. The results of MD analysis of the Pakistani academic writing can also be compared with the prospective studies on the language of other genres of academic writing like the language of text books, journals etc. This comparison will be a valuable study to evaluate the linguistic variation across sub-genres of academic writing.

The results of the present study will be of a great help to syllabi designers of books on academic writing by giving the practical insight into the usage of linguistic items in Pakistani academic English. The syllabi of academic writing may be set by taking practical examples from the present study regarding the different linguistic items found in the different categories of Pakistani academic writing.

The corpus of Pakistani academic writing can be used to prepare valuable material for copy-writers. It can be used to recognize the lexical packages and make lists of nouns, adjectives, passive and adjuncts and many other grammatical features. In addition, a small dictionary based upon the vocabulary items like adjectives, passives, nouns, adjuncts and verbs of language of academic writing can be produced with the different available software like Antconc or Wordsmith Tools.

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Appendix I

Mean Dimension Scores of Sub-Categories of Pakistani Academic Writing

Intro	SE Mean	Minimum	Maximum	SD
D1	0.278	-32.37	-7.35	4.269
D2	-5.1	0.33	0.9622	1.768
D3	0.174	2.66	25.75	2.673
D4	0.0757	-6.61	1.3	1.1632
D5	0.128	-2.86	11.6	1.967
Lit.R	SE Mean	Minimum	Maximum	SD
D1	0.278	-33.97	-7.35	4.262
D2	0.0629	-4.88	0.81	0.9648
D3	0.138	1.02	14.4	2.109
D4	0.0821	-6.61	2.46	1.2585
D5	0.132	-0.32	10.94	2.03
Method	SE Mean	Minimum	Maximum	SD
D1	0.304	-38.04	-11.81	4.661
D2	0.0583	-5.4	0.33	0.8942
D3	0.194	-2.22	17.89	2.973
D4	0.12	-6.61	9.56	1.837
D5	0.197	-2.11	14.29	3.016
Results	SE Mean	Minimum	Maximum	SD
D1	0.38	-41.35	-6.23	5.83
D2	0.0794	-5.35	0.54	1.2173
D3	0.151	0.85	15.57	2.314
D4	0.0981	-6.61	0.02	1.504
D5	0.167	- 3.230	17.170	2.562
Con	SE Mean	Minimum	Maximum	SD
D1	0.327	-36.35	-6	5.014
D2	0.0815	-5.53	2.07	1.249
D3	0.169	-0.97	15.81	2.596
D4	0.141	-6.61	4.23	2.156
D5	0.217	-3.24	25.6	3.322

Appendix II

Linguistic Features Relevant to 1988 MD Analysis of Academic Writing

Private verb (e.g., believe, feel, think)
'That' deletion (e.g., I think[that] he did it)
Present tense verb (uninflected present, imperative and third person)
Pro-verb 'do'
Demonstrative pronoun (that, this, those, these)
Adverb/Qualifier-emphatic (e.g., just, really, so)
First person pronoun (e.g., we, our)
Pronoun it/its
Verb 'Be' (uninflected present tense, verb and auxiliary
Subordinating conjunction-causative (e.g., because)
Discourse particles (sentence initial, well, now)
Nominal pronoun (e.g., someone, everything)
Adverbial-Hedge (e.g., almost, may be)
Adverb/ Qualifier, amplifier (e.g., absolutely, entirely)
Wh-question
Modals of possibility (can, may, could, might)
Coordinating conjunction-clausal connector
Wh-clause (e.g., he believed what I told him)
Stranded preposition (appearing at sentence end)
Noun (excluding nominalization and gerund)
Preposition
Attributive adjective (e.g., national interest, annual return)
Past tense verbs
Third person pronoun (except 'it')
Verb-perfect aspect
Public verb (e.g., assert, complain)
Wh-pronoun- relative clause-object position (the person who he likes)
Wh-relative clause-subject position (e.g., the participants who like to join…)
Wh-relative clause-object position with prepositional fronting ('pied piping')
Co-ordinating conjunction-phrasal connector
Nominalization (e.g., organization, development)
Adverb-time (e.g., instantly, soon)
Adverb-place (e.g., above, beside)
Adverb other (excluding adverb/Qualifier, Hedge, Emphatic, Time, Place, Amplifier
Infinitive verb
Modals of prediction (will, would.)
Suasive verb (e.g., ask, command)
Subordinating conjunction-conditional (if, unless)
Modal of necessity (ought, should, must)
Adverb within auxiliary (splitting aux-verb)(e.g., the product is specifically meant)
Adverbial-conjuncts (however, therefore, thus)
Agentless passive verb (e.g., however, therefore, thus)

Agentless passive verb (e.g., the scheme was introduced)
Passive verb+ by (e.g., the plan was introduced by principal)
Passive post nominal modifier (e.g., the message conveyed by)
Subordinating conjunction-other (e.g., as, excepts, until)
Present tense verbs (uninflected present, imperative and third person)
2nd Person Pronoun
Ist Person Pronoun
Verb 'Be'
Noun (excluding nominalization and Gerund)
Preposition
Verb perfect aspect
Predictive adjectives
Passives all
That-complement clause controlled by stance verb
To-complement clause controlled by stance verb
To-complement clause controlled by stance adjective
Process nouns, (isolation)
Other abstract nouns (e.g., idea)
Activity verb (e.g., give, take)
Mental verb (e.g., believe, enjoy)
Seem
Contractions
Split infinitives
NOT neg.
P-and
O_AND
FINAL PREP.

Book Review

All American Yemeni Girls: Being Muslim in a Public School

An interpretation to anethnography is what a heart is to a human being. As without a functional heart a human turns into an unbreathing mass, ethnography becomes a meaningless mound of words if it is not interpreted through a certain analytical framework. This is what Sarroub (2005)—the author of *All American Yemeni Girls: Being Muslim in a Public School*—does in her ethnography of 26 months about six second-generation American Yemeni Arab girls. The girls are high school students. Sarroub calls the girls *Hijabat* because they are always covered with *Hijab*—a type of veil that is used by adult Muslim females. Sarroub's major objectives in the ethnography are to understand and let her readers know (a) what it means to the girls to be Muslim, (b) what it means to them to succeed in the school, and, (c) how they construct their identities and negotiate with them for these purposes. For these objectives, the author investigates all physical, mental, and textual spaces that the girls use and reside in in the host country.

The first chapter of the ethnography is devoted to delineating the theoretical and methodological bases upon which Sarroub builds the ensuing chapters. She draws on a variety of sociological, anthropological, and sociolinguistic theories in order to make her readers understand how the *Hijabat* create their identities, negotiate with them, and lead their lives by the identities. The theories give meaning to the data the author collected. The theoretical discussion not only situates the girls' different selves in different contexts but it also helps a reader to view a dynamic interplay of religion, gender, and ethnicity in various spaces. She digs the chemistry of these variables by using interviews—both formal and informal—observation, shadowing, and, note-taking as her tools.

Sojourning is the theme of her second chapter. The chapter is meant to exhibit that the girls live in two worlds: Yemen from where their parents emigrated to the United States and the United States where they are born and settled. They live in the United States as if they had led their life in Yemen. Thus, their living style overtly manifests the influences of the Yemeni culture, traditions, and, most importantly, religion in their life in the host country.

The second chapter also talks about Layla. Layla is one of the six girls in her ethnography. Because Layla's life in the host country is similar to the other five, Sarroub focuses on her. Sarroub exhibits that her life choices, therefore

the life choices of the other five girls too, is mainly driven by three responsibilities: "to uphold the honor of the family, to become good mothers, and to succeed in school" (2005, p. 23). A reader knows as s/he reads the chapter further that the Layla's life is engulfed by an array of uncertainties that arise due to the sociocultural environment of her family. Uncertainties such as, for instance, Layla is uncertain when she shall be married; whether she shall be allowed to choose her life-partner on her own; when and whether she shall be sent to Yemen for good; and, whether she shall be allowed for higher education after finishing her high school. Her parents are the ones who know answers of the uncertainties. They are the ones who decide her future by following their Yemeni culture, traditions, and religion. Her parents may decide against the Layla's wishes that Layla fears may lead her to be *unsuccessful* in the eyes of the people of the host country.

Moreover, the second chapter also showcases the girls' "dual identities" (2005, p. 44)—Yemeni and American. The identities work differently in different contexts. For instance, being a good Yemeni girl, Layla does "many chores" (p. 37) at home. She upholds the values of her family by being modest and true Muslim. Thus, she recites the Holy Quran daily. She offers prayers five times a day. She keeps herself covered and distant from adult males. She remains submissive and obedient to her parents. And, being a good American Yemeni student, she works hard to perform better in the school as American students do. She intends to avail college education after her school as other students of the host country do.

How the girls construct their student identities and negotiate them with their Yemeni identity in the school is the focus of the third chapter. Sarroub (2005) shows that the girls behave out of modesty and "fear" (p. 49) at the school hallways and cafeteria. These are usually the spaces where they sit in a group. They look at only each other and converse with only female friends. What is noteworthy is that they do not converse with any male students at the places. They act out of modesty because, according to them, it is obligatory on females in their religion and culture to be humble. They fear because they think if they are caught conversing with American male students by their American Yemeni male students, the American Yemeni male students would later disrepute their names in their community. The male students would misinform about their behavior at the school.

Although the school hallways and cafeteria are the physical spaces of the school where they behave out of modesty and fear, their classrooms turn out to be the most comfortable places for them. It is in the classrooms where they talk with other male students without any fear and anxiety of being misperceived or whatever. The girls feel secure because their conversations revolve around issues related to school. In addition, there is always a teacher in classrooms. The teachers' presence adds to their sense of security. They

think that nothing *wrong* can occur in presence of the teachers. Sarroub takes this thought-provoking point as her one of the interesting findings of her ethnography. She compares the finding with such other ethnographies that have shown that spaces of school other than classroom have been taken as the most comfortable places by other minority students.

In the fourth chapter, Sarroub turns to the Hijabats' textual worlds and literacy practices in order to explore how they live in them. She thinks it is important to explore the spaces because it is in the spaces that they make "sense of their lives as high school students and good Muslim daughters, sisters, and mothers" (p. 59). The author contends, "the literary practices with which the Hijabat engaged were clearly influenced by their religion" (p. 64). Therefore, she thinks that their literacy practices at school must be contradicting with that of their religion and culture because the school literacy practices demand on them to question, critique, and challenge. However, their religious and cultural literacy practices discourage them to do so. The girls enter textual spaces at various locations such as home, school, parties, the Arabic school, and Muhathara (discussions and lectures organized by women in the community).The girls negotiate their Yemeni identity by categorizing the spaces in three categories: *Haram* (forbidden), *Hilal* (lawful), and *Mahkru* (not written as forbidden in the Quran but condemned by the Prophet Muhammad).At all the locations, they enter in 'Hilal' textual spaces. However, they do listen pop music of the mainstream culture but with Islamic content. They do wear Western clothes such as "tight" jeans and shirts but under "their scarves and *abayas* (cloaks, my meaning)*"* (p. 69).Thus, their scarves and abayas cover the shirts and jeans the wear. Moreover, in wedding parties that characterize as their reserved spaces, they do indulge in "unrestricted behavior and listen to different types of music and in-between lyrics" (p. 70).

The fifth chapter explores how the Muslim students, who constituted about 40% student population, have been accommodated in the school. The accommodative measures were necessitated particularly by two incidents. One, when their parents were asked to postpone their Eid-ul-Udha (one of the two biggest Muslim feasts) celebrations from Thursday to weekends. They were asked to do so because the school administration feared the school's attendance might fall down 75% threshold. In that case, the district might be forfeited with $340, 000 as a penalty. The other, when an Arab student fought with a non-Arab student in the student cafeteria. The measures were carried out at both formal and informal levels. At the formal level, a committee was established to promote cultural understanding between the Muslim and non-Muslim students. Educational content regarding Muslims and their cultures was included in curriculum. The Muslim students were granted Friday afternoon leave for their Friday Prayers. In addition, bilingual program was initiated for the new Arab students who were instructed in both Arabic and

English. At the informal level, the Muslim students were provided with Hilal food at the cafeteria. Signs in both English and Arabic were used within the school premises. Finally, they were granted leave on their religious holidays.

In the sixth chapter, although the *Hijabats'* sense of uncertainty regarding their success in general and future education, marriage, and jobs in particular has been made predominant, the theme of their desperation is again brought into focus. Notwithstanding the fact that the girls perform well as compared to Arab boys in securing their CGPA and gaining teachers' appreciation, the girls are not sure if they shall be able to profit from their hard work. Teachers too realize their anxiety but cannot do anything because these issues are directly linked to their private domains where their families influence more than the teachers can do. Finally, in the seventh chapter, the author writes down her research experiences of conducting observations for her ethnography in the backdrop of September 11th events and their impacts on minorities in general and Muslims in particular. She recollects that she first faced some problems about her presence at both community and school spaces. Later, she succeeded in developing a rapport that subsequently won her an entry into the Muslim lives. She became a "non-threatening presence" (p. 122) among them. Sarroub also notes down in the chapter the discussions she observed the September 11th events had initiated. The debates focused about the themes of citizenry and Americanness.

In effect, becoming an acceptable observer in such research work speaks Sarroub's firsthand and genuine experience as an ethnographer. Her observations reflect her deep insight that show to a reader the new changes that are emerging in the lives of minorities in the United States as an effort to adapt and survive. Although most of the girls accept the version of success as held by their parents for them up to the end of this ethnography, the book turns out to be a meaningful experience of understanding certain theoretical stances taken by the sociologists, anthropologists and education experts in minority and immigrants' education discourse. For instance, the book makes evident the role and nature of social capital in the construction of the girls' identities (Bourdieu, 1991). Most of the parents of these girls are uneducated, thus, they do not provide any concrete academic help and guidance. However, discourses prevalent in their homes and the community (mosque, religious school, etc.) direct them to do what they should in accordance with the rules, norms, and traditions of their culture and religion. Therefore, their cultural and social capital keeps cultivating them. Moreover, because their cultural and social capitals are powerful, the girls pursue accumulating them with heart and soul in addition to using them in their lives.

The ethnography manifests that the girls' living to the expectations of their culture comes out as the intersection point too where their cyclone of uncertainties grows as a result of the clash of two versions of success: one

which is held by their parents for them and the other held by these girls. Their parents' version is shaped by their cultural and religious norms and the girls' one is fashioned by their aspirations and the discourse of free choices that they have had from the mainstream culture of the host country. Although the girls burn the mid nights' oil for their schoolwork, as their culture demands on them too, they only want to be teachers and nurses in future. They want only these jobs because the jobs are held in high esteem in their culture. They succumb to their parents' choices for the choices. Resultantly, the ethnography shows that their parents' should-do frame of references dominates the girls' wan-to-do frame of references.

As far as the girls' working hard in the school is concerned, the ethnography, in effect, vindicates the Ogbu's theory of voluntary minorities and the minority students' struggle for success. Ogbu (1987) had concluded that voluntary minority students work hard as they are inspired by their "folk theory of making it and survival strategies." The girls study hard due to such folk theory from their culture, community, and their parents who hold hard working students in high esteem. The girls get high appreciations from their teachers and secure decent GPA.

Above all, the ethnography is a must read for anyone who is interested in understanding how a certain minority students act as minority students as well as the nationals in a host country. It is adequately said that one who has undergone a certain process better qualifies to discuss and interpret the process. This is what seems to be quite true as far as the author of the ethnography is concerned. Because Sarroub herself underwent the process of immigration and assimilation, her observations are sharp, deep, and meaningful. This ethnography is indeed an invaluable contribution to the literature regarding minorities and their settlement in host countries.

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