Identification of Boosters as Metadiscourse across Punjabi and Urdu Languages: A Machine Translation Approach

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Abstract

Boosters are said to function appropriately as metadiscourse features across languages. This study, therefore, aimed to investigate the functions and appropriateness of the metadiscourse features across Punjabi and Urdu languages. For this purpose, a list of 79 boosters (as metadiscourse features) was considered that (boosters) were first transliterated across Punjabi and Urdu languages employing a machine translation process. Punjabi translation was carried through ‘Akhar’ (a software), and Punjabi corpus (a tool). Whereas Urdu translation was realized through online Urdu thesaurus, and ‘ijunoon’ (an online dictionary). Machine transliteration was followed by manual cleansing of Punjabi and Urdu translated wordlists that helped identify boosters in the corpora. Appropriateness of the identified boosters was then realized through expert opinion and Punjabi corpus (for the Punjabi language), and expert opinion, online Urdu thesaurus, and Urdu WordNet (for the Urdu language). This process further guided about how to; make wordlists, filter as well as verify translated words, and offer interactional and interactive metadiscourse categories across Punjabi and Urdu languages.

Keywords: Appropriateness of Metadiscourse Features; Identification of Boosters; Machine Transliteration; Metadiscourse across Languages; Metadiscourse Functions

Introduction

Metadiscourse features are linguistic items that organize textual and interpersonal features across different languages. This study is about boosters as metadiscourse category which incorporates intensity into the text across Punjabi and Urdu languages. Many studies were conducted on metadiscourse features across languages e.g. English, Thai (Bickner & Peyasantiwong, 1988), Chinese (Zhang, 1990), Finnish (Mauranen, 1993; Tirkkonan-Condit, 1996), Japanese (Maynard, 1996), and Persian (Hashemi & Golparvar, 2012). But no significant attempt has been made on metadiscourse features across Punjabi (i.e. Shahmukhi script) and Urdu languages. Thus, this study (being the first attempt) explores metadiscourse features across Punjabi and Urdu languages through machine translation.

Past studies (e.g. Bickner & Peyasantiwong, 1988; Hashemi & Golparvar, 2012; Mauranen, 1993; Maynard, 1996; Tirkkonan-Condit, 1996; Zhang, 1990) provide the taxonomy of metadiscourse features that categorizes into interactive and interactional categories. The studies by Siddique, Mahmood, and Iqbal (2018) and Siddique, Mahmood, Azhar, and Qasim (2018) proposed a comprehensive taxonomy of boosters as metadiscourse features as per their interactive and interactional categories. The said study is a significant source of inspiration for this study. The developed list of boosters has never been studied across Punjabi and Urdu languages. Thus, this study is going to be the first attempt to provide an awareness of boosters across Punjabi and Urdu languages. Besides, this study introduces a new domain of studying, identifying, and functioning the role of boosters across Punjabi and Urdu languages. In this way, this study outlines such issues as have not been discussed before. As the main concern, this study focuses to see how boosters perform

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functions across Punjabi and Urdu Languages. To answer this query, this study has identified boosters across Punjabi and Urdu languages through machine translation. Thus, this study deals with the development of boosters, the process of transliteration of boosters through the machine, the process of cleansing the transliterated words as errors, and the process of mapping boosters across Punjabi and Urdu languages. Keeping in view the aforementioned aims, this study speculates the following research questions:

1. What boosters (as metadiscourse features) are transliterated across Punjabi and Urdu Languages?

2. How boosters (as metadiscoursal features) are identified across Punjabi and Urdu Languages?

3. Which boosters (as metadiscoursal features) perform functions across Punjabi and Urdu languages?

The interactional category is further divided into five sub-categories i.e. hedges, engagement markers, relation markers, attitude markers, and boosters (Hyland, 2018). This study has delimited metadiscourse features to its interactional category i.e. boosters. This study has only focused on boosters.

Literature Review

This literature deals with several contributions that have been executed on metadiscourse features across Punjabi and Urdu languages. Most of the studies have described metadiscourse features’ utility in real life. Many studies were seen on metadiscourse features across languages. But there is no significant attempt has been made on metadiscourse features across Punjabi (i.e. Shahmukhi script) and Urdu languages. Therefore, this study has attempted to examine boosters as a category of metadiscourse across Punjabi and Urdu languages.

Punjabi Language

Different local or regional languages (e.g. Punjabi, Pashto, Sindhi, Saraiki, Urdu, and Balochi) are used in Pakistan (Bhurgri, 2006). The Punjabi language has two dialects: (1) Eastern Punjabi which is mostly spoken by the people of Punjab in India; and (2) Western Punjabi which is mostly spoken by the people of Punjab in Pakistan (Kaur, Sharma, Preet & Bhatia, 2010; Narang, Sharma & Kumar, 2013; Sharma & Aarti, 2011). Perso-Arabic (Shahmukhi) script is used by the Pakistanis, and Gurmukhi/Devanagari script is used by the Indians (Lehal & Saini, 2011; Malik, 2006; Virk, Humayoun & Ranta, 2011).

The Punjabi language connects back with the Indo-Aryan languages (Gill & Lehal, 2008). But with time, Persian, Arabic, and Turkish words constituted the Punjabi vocabulary. Also, there is a problem with its alphabets i.e. there are no standardized alphabets in Punjabi. It is usually written by using the alphabet of Urdu (Bhurgri, 2006). Punjabi (particularly spoken in Pakistan) is a less-resourced language. Generally, very little work is done on Punjabi (Kaur, et al., 2010; Narang et al., 2013). Moreover, Shahmukhi is written from right to left and is based on the Nastalique style of Persian and Arabic script. The shape of the characters (in a word) is context-sensitive, which means a letter has a different shape if it occurs at the start, middle, or end position of a word (Malik, 2006).

Urdu Language

Urdu (اُردو) is written in the Persio-Arabic script and normally in Nastaliq writing style (Hussain, 2004). It is a right-to-left script and the shape of its characters differs depending on its position in words i.e. the shape of a character would be different in initial, middle, and end of word positions. Urdu is written in bidirectional form i.e. letters are written from right-to-left and numbers from the left-to-right format. Urdu is written with consonantal letters and aerabs. The vocalic content is specified by using the aerab with letters. Aerab position can be on the top and bottom of a letter (Adeeba & Hussain, 2011).

Machine Translation

The terms transliteration and transcription are often used as generic terms for various processes like transliteration, transcription, romanization, transcribing, and technography (Halpern, 2002). Transliteration is defined as “to write a word or letter in a different alphabet” (Halpern, 2002). It denotes a process that maps one writing system into the other, ideally letter by letter. It attempts to use a one-to-one grapheme correspondence (orthographic conversion). A good transliteration is a reversible process to ensure that the source word can be regenerated from the target transliterated word (Halpern, 2002). On the other hand, transcription is defined as a written representation of words or music. In the words of Halpern (2002) “transcription is the representation of the source script of a
language in the target script in a manner that reflects the pronunciation of the original, often ignoring graphemic (character-to-character) correspondences” (p. 2).

**Metadiscourse Studies across Languages**

The recent studies on metadiscourse across different languages have employed different research methods. These studies are seen in different domains such as academic writing, book reviews, spoken language, newspapers, and textbooks. The features of metadiscourse have been studied across languages, genres, and disciplines. A very recent study on metadiscourse across language, Gholami, Tajali, and Shokrpour (2014) investigated metadiscoursal features in English medical texts and their Persian translations. This corpus-based study used a quantitative approach to present metadiscoursal features in the data. To conduct the study, the researchers practiced different tools such as a taxonomy of Hyland (2005) for data analysis; Kolmogorov Smirnov test (KS-test), t-test, and Wilcoxon signed-rank test were used to arrange numerical results of the metadiscourse features. Another study on metadiscourse was conducted by Herriman (2014) who studied metadiscourse features in non-fiction texts across different languages and their translations. This study was corpus-based and used an integrative approach and Hyland’s (2005) model for data analysis focusing on content analysis using a qualitative approach.

**Translation Method and Metadiscourse**

According to Newmark (1988), “translation is rendering the meaning of a text into another language in the way that the author intended the text” (p. 5). The translator tries to closely interact with both source and target texts of all kinds for particular purposes and particular recipients, usually in response to a translation job commissioned by a client (Hatim & Mason, 2005). Williams (2005) states that a translator requires the knowledge of literary and non-literary textual criticism since he has to assess the quality of a text before he decides how to interpret and translate it. A translator translates a source text into a target text, thereby implicitly or explicitly taking into account the form and genre of the text and the fact that the whole process of translation is embedded in a cultural and political context (Vermeer, 2007, p. 174). Translation of scientific texts, as happens with other texts of specialization, can be approached from different perspectives e.g. discourse, register, genre, terminology, etc. as suggested by the researchers (e.g. Gamero Pérez, 2001). One successful approach is the pragmatic perspective that applies genre and register to translation (Jiménez, 2001). This allows to identify all communicative functions and translates them into the target text.

**Methodology**

This study attempts to provide a platform for studying metadiscourse features across Punjabi (Figure 1) and Urdu languages (Figure 2). In this regard, a roadmap was devised to see that how these features were mapped. For this purpose, both Punjabi and Urdu languages were dealt with separately, the boosters as metadiscourse features were mapped across Punjabi and Urdu languages using machine transliteration.

![Figure 1. Mapping of Boosters in Punjabi Language](image1)

![Figure 2. Mapping of Boosters in Urdu Language](image2)
Development of Boosters
A study by Siddique, Mahmood, and Iqbal (2018) has already developed a comprehensive list of boosters considering two sources i.e. Hyland (2005) and the software (textinspector.com). This study considered the taxonomy of boosters by modifying it according to the requirement (Table 1).

Table 1. List of Boosters (proposed in Siddique, Mahmood & Iqbal, 2018)

| Sr. No. | Boosters       | Sr. No. | Boosters       | Sr. No. | Boosters       | Sr. No. | Boosters       |
|---------|----------------|---------|----------------|---------|----------------|---------|----------------|
| 1       | actually       | 21      | demonstrated   | 41      | indeed         | 61      | show          |
| 2       | always         | 22      | demonstrates   | 42      | indisputable   | 62      | showed        |
| 3       | apparent       | 23      | determine      | 43      | indisputably   | 63      | shown         |
| 4       | believe        | 24      | doubt          | 44      | it is clear    | 64      | shows         |
| 5       | believed       | 25      | doubtless      | 45      | know           | 65      | sure          |
| 6       | believes       | 26      | essential      | 46      | known          | 66      | surely        |
| 7       | beyond         | 27      | establish      | 47      | must           | 67      | the fact that |
| 8       | beyond doubt   | 28      | established    | 48      | never          | 68      | think         |
| 9       | by far         | 29      | even if        | 49      | no doubt       | 69      | thinks        |
| 10      | certain        | 30      | evident        | 50      | obvious        | 70      | thought       |
| 11      | certain that   | 31      | evidently      | 51      | obviously      | 71      | truly         |
| 12      | certainly      | 32      | find           | 52      | of course      | 72      | undeniable    |
| 13      | certainty      | 33      | finds          | 53      | prove          | 73      | undeniably    |
| 14      | clear          | 34      | found          | 54      | proved         | 74      | undisputedly  |
| 15      | clearly        | 35      | I believe      | 55      | proves         | 75      | undoubtedly  |
| 16      | conclusively   | 36      | in fact        | 56      | realize        | 76      | well known    |
| 17      | decidedly       | 37      | incontestable | 57      | realized       | 77      | without doubt |
| 18      | definite       | 38      | incontestably | 58      | realizes       | 78      | won’t         |
| 19      | definitely     | 39      | incontrovertible | 59 | really    | 79      | true          |
| 20      | demonstrate    | 40      | incontrovertibly | 60       | should       |         |               |

The number of 79 boosters were considered for transliteration purposes across Punjabi and Urdu languages. To transliterate the boosters across Punjabi and Urdu languages, the following procedures were adopted.

Process of Transliteration
The taxonomy of boosters was transliterated into Punjabi and Urdu languages. The procedure of transliteration of both Punjabi and Urdu languages was explained.

Punjabi Language
In the case of Punjabi transliteration, several steps were followed. Firstly, all boosters were individually transliterated through software i.e. Akhar (2016). The steps of transliteration were portrayed through pictograms in figures 3 to 5.

Step 1: All boosters were individually searched in the dictionary of Akhar (2016). As a result, the transliteration was noted in the Gurmukhi script.

Figure 3. Finding Words in Gurmukhi via Dictionary (Akhar, 2016)

Step 2: After searching outcomes, the resultant occurrence in the form of Gurmukhi was pasted onto the writing page and then Gurmukhi was transliterated into Shahmukhi (Figure 2).
Figure 4. Transliteration of the Searched Gurumukhi into Shahmukhi Words (Akhar, 2016)

**Step 3:** After the transliteration from Gurumukhi into Shahmukhi, for better a view, the transliterated occurrence was brought to notepad for the further procedure (Figure 3).

**Figure 5. Retrieving Transliterated Shahmukhi Words into Text-File (Akhar, 2016)**

### Means of Punjabi Words Retrieval

For having Punjabi translation, two sources were used i.e. Punjabi Corpus (Akhter, Mahmood & Nadeem, 2019; Arslan, Mahmood & Hayat, 2019) and Akhar (2016). These sources helped seeking boosters by providing examples.

### Process of Identifying Punjabi Translations of Boosters

A procedural attempt, utilizing above discussed the sources, was made to have a Punjabi translation of the boosters. After using the first source (Akhar, 2016), firstly a variety of Punjabi translations of the same boosters was recorded. Secondly, the outcomes from machine transliteration (Akhar, 2016) of boosters were refined after removing the transliterated Gurumukhi words which were autonomously transliterated. Using Punjabi corpus, a list of boosters was studied and an expert finalized the presence of transliterated boosters in Punjabi corpus. After using both sources for having Punjabi transliteration of boosters, both transliterations were merged.

### Process of Cleansing in Punjabi Transliteration

After transliteration of boosters in the Punjabi language, the obtained taxonomy of transliterated boosters into Shahmukhi was cleaned. The process of cleaning revealed that the influence of Gurumukhi was observed and then cleaned in transliterated boosters in Shahmukhi script (Table 2).

**Table 2. Differences Removed in Shahmukhi Punjabi Transliterated Words**

| Sr. No. | English | Grammatical Category | Source 1 Dictionary (Akhar): Shahmukhi | Differences removed (Gurmukhi) | Refined Words | Source 2 Punjabi Corpus | Merge: (Refined +Punjabi Corpus) |
|---------|---------|---------------------|-----------------------------------|-------------------------------|--------------|--------------------------|----------------------------------|
| 1       | Actually | Adverb              | سمج حسب، اصل و ج، دراصل، واستوک توری | سمج مک، اصل و ج، دراصل | اصل وج، دراصل استوک توری | اصل وج، دراصل استوک توری | سمج مک، اصل و ج، دراصل، واستوک توری |

Table 2 revealed that the current study used two different sources (i.e. Akhar software, 2016) dictionary and Punjabi Corpus) for extracting translations in the Punjabi language. To remove
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differences, the irrelevant words as errors transliterated in Shahmukhi from Gurmukhi were manually removed. After removing the differences, both sources (where the translations were taken) were mapped together.

**Process of Mapping Identified Boosters**

After cleansing the transliterated errors, the next process of mapping was made through the following steps. The purpose of this process was to observe and verifying the presence of transliterated Punjabi boosters. For mapping’s sake, the Punjabi translations of both sources were mapped together (Table 3).

**Table 3. Mapping of Identified Boosters**

| Sr. No. | Boosters | Grammatical Category | Sources | Merge (Akhar+Punjabi Corpus) |
|---------|----------|----------------------|---------|-----------------------------|
| 1       | Actually | Adverb               | Punjabi Corpus | اصل وچ |
|         |          |                      | Akhar   | دراصل |

As mentioned in Table 3, the translations of the word “actually” were assisted by two sources. The first source i.e. Punjabi corpus contributed to a single translation “اصل وچ”. The second source i.e. Akhar (2016), contributed to two translations of the same word “دراصل وڈیشیپ” and “براصل”. Finally, the word “actually” was transliterated into the Punjabi language and mapped to three transliterations.

**Urdu Language**

The same processes were applied to translate boosters in the Urdu language. To transliterate boosters in the Urdu language, several steps were followed. Firstly, both sources provided Urdu translations. The step of transliteration was presented through a picture (Figure 6).

**Step 1:** A taxonomy of boosters was searched in dictionary: ijunoon. As a result, the transliteration was noted.

![Figure 6. Finding Translation of Words in Urdu via Dictionary: ijunoon](image)

**Step 2:** After searching outcomes, the resultant occurrences were noted as translations of the words.

**Means of Urdu Words Retrieval**

For this purpose, the two sources were used to transliterate boosters in the Urdu language such as Urdu Thesaurus and a dictionary: ijunoon. These sources helped in seeking boosters by providing examples, in which boosters were used.

**Process of Identifying Urdu Translations of Boosters**

A procedural attempt was made to have an Urdu translation of the boosters. After using the first source i.e. Urdu Thesaurus, firstly a variety of Urdu translations of the same boosters was recorded. Secondly, the outcomes from machine transliteration (a dictionary: ijunoon) of boosters were refined after removing the transliterated Urdu words that were autonomously transliterated. Using Urdu corpus, a list of boosters was studied and the expert finalized the presence of transliterated features of boosters in the Urdu corpus. After using both sources, for having Urdu transliteration of the feature of boosters, both transliterations were merged.

**Process of Cleansing in Urdu Transliteration**

After the transliteration of boosters in the Urdu language, the obtained taxonomy of transliterated boosters into Urdu was cleaned. The process of cleaning revealed that the influence of machine
translation was observed and then cleaned in transliterated features of boosters. For example, see Table 4.

**Table 4. Differences Removed in Urdu Transliterated Words**

| Sr. No. | English | Grammatical Category | Source 1 Dictionary: ijunoon | Difference removed | Refined Words | Source 2 Urdu Thesaurus | Merge: (Dictionary +Urdu Thesaurus) |
|---------|---------|----------------------|-------------------------------|-------------------|---------------|------------------------|----------------------------------|
| 1       | Actually | Adverb               | گب، گی، گے                   | گب، گی، گے        | پونا جابی ہوًب چبہئے | پونا جابی ہوًب چبہئے | پونا جابی ہوًب چبہئے |

**Process of Mapping Identified Boosters**

After the process of cleansing the transliterated errors, the next process of mapping was made through the following steps. The purpose of this process was to observe and verifying the presence of transliterated Urdu boosters. For mapping, the Urdu translations of both sources were mapped together (Table 5).

**Table 5. Distribution of Transliterated Urdu Words**

| Sr. No. | English | Grammatical Category | Sources | Urdu Words |
|---------|---------|----------------------|---------|------------|
| 1       | Actually | Adverb               | Urdu Thesaurus | اصل | حقيقا |

As shown in Table 5, the translations of the word “actually” were assisted by two sources. The first source i.e. Urdu Thesaurus, contributed to a single translation i.e. "دراصلسمیان". The second source, i.e. a dictionary: ijunoon, contributed to two translations of the same word i.e. "اصلسمیان" and "حقیقیا". Finally, the word “actually” was transliterated into Urdu language and mapped to three transliterations.

**Results and Discussion**

This study developed the list of boosters for having transliterations across Punjabi and Urdu languages. Table 6 represents the details about how the boosters (68 in number) were transliterated in Punjabi 268 wordlist. Out of 268, only 164 words were found in the Punjabi corpus and the remaining were absent. Besides, the left wordlist was keenly observed and some repetitive words were removed from that wordlist. Finally, 91 words were not found in the selected Punjabi corpus.

**Table 6. Results of the Formation of Boosters with its Punjabi Transliteration**

| Number of Boosters in English | Translitered in Punjabi | Differences removed | Punjabi Words | Punjabi Wordnet | Online Punjabi Corpus | Expert | Left Words | Repetition removed | Unique Left Words |
|------------------------------|-------------------------|---------------------|---------------|-----------------|-----------------------|--------|------------|---------------------|------------------|
| 68                           | 268                     | 268                 | 164           | 105             | 14                    | 91     |            |                     |                  |

For having boosters in Punjabi translation, the comprehensive table has been given below. In Table 7, which represents boosters in Punjabi translation, a category of boosters has been derived from past research conducted (Siddique, Mahmood & Iqbal, 2018) and further modified. The very next column is about the grammatical category of the list of words that are being identified. After modifying and providing grammatical categories of the taxonomy, these features have been transliterated through the machine as above-mentioned. The other column contains the differences found that have been removed and then the next two columns are the resultant of two sources. The last column merges the variety of identified boosters from two sources.

**Table 7. Identification of Boosters across Punjabi Language**

| Sr. No. | Boosters | Grammatical Category | Dictionary (Akhar): Shahmukhi | Differences removed (Gurmukhi) | Refined Words | Punjabi Corpus | Merge: (Refined +Punjabi Corpus) |
|---------|----------|----------------------|-------------------------------|-------------------------------|---------------|----------------|----------------------------------|
| 1       | Actually | Adverb               | سج مج، اصل وج، دراصل وج، استوکج نور، نیں، سدہ، نت، بھیض، بر سمن، بردم، بر وہیں، بر | سج مج، اصل وج، دراصل وج، استوکج نور | سدہ، نت، بھیض، بر سمن، بردم، بر وہیں، بر | سج مج، اصل وج، دراصل وج، استوکج نور | سدہ، نت، بھیض، بر سمن، بردم، بر وہیں، بر |
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| Table 8 | Results of the Formation of Boosters with its Urdu Transliteration |
|---------|---------------------------------------------------------------|
| Number of Boosters in English | Transliterated in Urdu | Differences removed | Urdu Words | Urdu WordNet | Online Urdu Corpus | Expert | Left Words | Repetition removed | Unique Left Words |
| 74      | 278                | 34                    | 244         | 134        | 2               | 10      | 98          | 10                  | 88                  |

On the other side, the same procedures have been implemented on the Urdu language for having its transliteration of booster’s features. In Table 9, a category of boosters has been derived from past research and further modified. The very next column is about the grammatical category of

Table 8 represents the details about how the boosters (74 in number) were transliterated in Punjabi 278 wordlist. Out of 278, 34 differences were removed as shown in Table 8. Of 244, only 134 words were found in the Urdu corpus whereas the remaining were not found. Next, the sentences were formed through 3 sources i.e. Urdu WordNet, Online Urdu Corpus, and Expert opinions. The last thing was when the left wordlist was keenly observed; 10 repetitive words were removed from that wordlist. Finally, 88 words were not found in the selected Punjabi corpus. These were unique Urdu left words.
the list of words that are being identified. After modifying and providing grammatical categories of
the taxonomy, these features have been transliterated through the machine as above-mentioned. The
other column is about the differences that have been removed and then the next two columns are the
resultant of two sources. The last column merges the variety of boosters identified from two different
sources.

Table 9. Identification of Boosters in Urdu Language

| Sr. No. | English | Grammatical Category | Sources |
|---------|---------|----------------------|---------|
| 1       | Actually | Adverb               | Urdu Thesaurus, ijunoon |
|         |         |                      |         |
| 2       | always  | Adverb               | ijunoon |

This study has particularly studied boosters. For this purpose, 79 boosters have been analyzed
across Punjabi and Urdu languages. After analyzing these features, the identified boosters were
studied to check their appropriateness through the examples as derived from Punjabi and Urdu
corpora. An instance of the word ‘Actually’ as transliterated in Urdu, the identified translations in
Urdu from different sources have been exemplified. These examples have been retrieved from three
sources i.e. Urdu WordNet as proposed by the University of Engineering and Technology and Urdu
Corpus, Online Urdu corpus, and expert opinions (Table 10).
### Table 10. Verification of Identified Transliterated Words in Urdu Sentences

| Sr. No. | English | Grammatical Category | Sources | Translations of Sources | Differences Removed | Urdu Words | Urdu WordNet | Left Urdu Words |
|---------|---------|----------------------|---------|-------------------------|---------------------|------------|--------------|----------------|
| 1       | Actually | Adverb               | Urdu Thesaurus | دراصل | دراصل |相符 میں |相符 میں |相符 میں,相符 میں |相符 میں |
|         |         |                      | ijunoon   | اصل میں,相符 میں | Online Urdu (Corpus) |            |              |                |
| 2       | always  | Adverb               | ijunoon   | میشی | میشی |相符 میں |相符 میں |相符 میں |相符 میں |
|         |         |                      |          | Online Urdu (Corpus) |            |              |                |
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3 apparent Adjective

ijunoon

Naima, طاير

4 Certainly Adverb

ijunoon

پر، بیان، ہے مج، ایسے شک

5 certainty Noun

ijunoon

ایقان، قطعی امر

6 clearly Adverb

ijunoon

کئی طور پر، بلا شبہ

7 conclusively Adverb

Urdu Thesaurus

واضح

قابِ اطمینان طور پر، بیان، مج، ایسے شک

Expert

Opinion

(Expert Opinion)

یقین

پر، بیان، مج، ہے

کئی طور پر، بلا شبہ

Urdu Thesaurus

 واضح

واضح

وہ مج، مج، مج، مج

کئی طور پر، بلا شبہ

 Urdu

Thesaurus+ijunoon

قابِ اطمینان

قابِ اطمینان

طور پر

بلابلا

یقین

ایقان، قطعی امر

اطمنہ

اطمنہ

نام

کئی طور پر

کئی طور پر

کئی طور پر

کئی طور پر

کئی طور پر

کئی طور پر
Similarly, the list of boosters as transliterated in Punjabi using different sources has been exemplified. These examples have been retrieved from the Punjabi corpus (Table 11).

Table 11. Verification of Identified Transliterated Words in Punjabi through Sentences

| Sr. No. | Boosters  | Sources       | Merge (Akhar+Punjabi Corpus) | Sentence Example                                                                 | Left Words |
|---------|-----------|---------------|------------------------------|---------------------------------------------------------------------------------|------------|
| 1       | Actually  | Akhar         |                               | اصل وج تون مبری گل ني سمجھا ريا                                           | اصل وج    |
|         |           |               |                               | مین سمج میں نوین ساری گل دس سمجھا ريا                                        | مین سمج    |
|         |           |               |                               | دراسل نوین ساری گل دا نوین سمجھا ريا                                          | دراسل نوین |
|         |           |               |                               | سدا جنودا را نت دا ره موجودا مین سمج نیں سمجھا ريا                             | سدا جنودا  |
|         |           |               |                               | سدا جنودا رہ موجودا مین سمج نیں سمجھا ريا                                     | بھی بھی    |
| 2       | always    | Akhar         |                               | مین بر توچی خسیر پنتا مین بر توچی اپنی اپنی سمجھا ريا                           | مین بر توچی |
|         |           |               |                               | مین بر توچی اپنی اپنی سمجھا ريا                                             | بھی بھی    |
| 3       | apparent  | Punjabi Corpus |                               | مین سارا کھڑا سمج سمج سمجہ سمجا ريا                                          | مین ساراکھرا  |
To sum up this study, boosters are lexical items that are used to create an intensity in the text and enhance a writer’s narrative significance. 79 boosters as metadiscourse features are acquired (Siddique, Mahmood & Iqbal, 2018) and transliterated across Punjabi and Urdu languages. Through the transliteration process, it is evident that boosters are pervasive across Punjabi and Urdu languages. To find out the boosters across Punjabi and Urdu languages, the different ways such as translation made through the software: Akhar (2016) and the acquired corpora of both Punjabi and Urdu languages have been used in this study. In this way, the devised methodology including translation processes for both languages (i.e. Akhar software, Punjabi corpus, Urdu thesaurus, and online dictionary: ijunoon) helps explore other metadiscourse features across Punjabi and Urdu languages. Finally, the explored transliterated boosters across Punjabi and Urdu languages are closer to the boosters in English concerning their functions in such languages. In this way, Punjabi and Urdu languages have more diversity of boosters in comparison with English language boosters.

**Conclusion**

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