Variation across Disciplines and Degrees in the Use of Adjectives in Postgraduate Acknowledgements Written in English by Turkish L1 Writers

Fulya Eslek Onur[1] iD , PhD Candidate, Anadolu University, Department of Foreign Language Education, Program in English Language Teaching
fulyaeslekonur@anadolu.edu.tr

Abstract: This study investigates how postgraduate writers use adjectives in acknowledgements written in English, focusing on their frequency, syntactic characteristics, and distribution across academic degrees and disciplinary domains. The corpus, titled ACK-CO, comprises 256 acknowledgements written by Turkish L1 postgraduate writers in two domains, Humanities and Social Sciences (HSS) and Science, Technology, Engineering, and Mathematics (STEM), and at two degree levels (MA/MS and PhD). All texts were compiled from the Council of Higher Education (CoHE) National Thesis Centre and analysed using R and Sketch Engine. Descriptive analysis showed that acknowledgements in PhD dissertations were longer and contained a higher density of adjectives than those in MA/MS theses. However, chi-square tests comparing the frequency of adjective use across degree levels did not reach statistical significance. The results, nevertheless, suggested a slight tendency toward higher adjective use in the PhD acknowledgements. In contrast, comparison of disciplinary domains revealed a significant difference, with HSS acknowledgements containing more adjectives overall than those in STEM. To gain further insight into how adjectives function within texts, a syntactic analysis revealed a strong preference for an attributive position among the most common adjectives, such as *special, valuable*, and *great*. These results, together with the frequency patterns, indicate that disciplinary domain tends to influence adjective use more strongly than degree level. Writers in the soft sciences appear more inclined to use adjectives expressing gratitude and appreciation. The study contributes to corpus-based research on academic register variation by suggesting that adjective use may vary across degree levels and disciplinary domains in postgraduate acknowledgements.

Keywords: *acknowledgements, adjective use, register, academic discourse, postgraduate writing*

INTRODUCTION

Studies of written registers, particularly those related to academic writing, have attracted considerable attention in recent decades. As a broad category, academic prose encompasses diverse sub-registers, including research articles, textbooks, theses and dissertations. Biber and Conrad (2019) highlight substantial linguistic and situational variations among these sub-registers, noting further subdivisions into even more specialised genres (Biber & Conrad, 2019, p. 129). One specialised genre embedded within theses and dissertations is the acknowledgements section, characterised by its distinct communicative purpose.

Acknowledgements provide a unique space for writers to express gratitude in a semi-formal, yet personally meaningful way. As a ubiquitous component of theses and dissertations, they are of paramount importance to researchers who "demonstrate their awareness of some central academic values such as modesty and gratitude, establish their credibility, recognise debts, and achieve a sense of closure at the end of what is often a long and demanding research process" (Hyland, 2004, p. 304).

49

Variation across Disciplines and Degrees in the Use of Adjectives in Postgraduate Acknowledgements Written in English by Turkish L1 Writers

While acknowledgements help writers achieve closure at the end of a demanding research process, they also function as indicators of academic respectability (Hyland, 2003). Although they are neither strictly academic nor entirely personal, they occupy a sociopragmatically significant position separate from the main academic content, thus forming an essential component of academic discourse (Hyland, 2003).

Acknowledgements also serve as bridges connecting personal experiences to social contexts and academic discourse to everyday language. Dissertation acknowledgements, for instance, constitute specialised rhetorical spaces where doctor of philosophy (hereafter PhD) candidates express appreciation and construct their academic and social identities (Hyland & Tse, 2004). As noted by Hyland (2004), the acknowledgements genre enables writers to express personal reflections on their research journey in a formal, yet intimate tone. Nevertheless, despite their notable communicative and rhetorical significance, acknowledgements remain a relatively understudied genre, frequently characterised as "a Cinderella genre" due to their neglect in academic research (Hyland, 2003, p. 243).

Previous studies have predominantly analysed acknowledgements from a genre-specific perspective. Numerous studies (e.g. Altakhaineh et al., 2024; Hyland & Tse, 2004; Kuhi & Rezaei, 2014; Loan, 2017; Yang, 2012; Zare-ee & Hejazi, 2019) employed Hyland's (2004) *move model*, namely *reflecting, thanking* and *announcing*, to identify generic structural moves. Only a limited number of studies (e.g. Bao & Liu, 2024; Chan, 2015; Cheng, 2012) have employed corpus-based approaches to investigate the linguistic characteristics of acknowledgements. Although previous research has combined genre-specific and corpus-based methods, certain linguistic features, particularly the use of adjectives, have received limited attention. Among these linguistic features, adjectives are of special interest as they often encode writers' evaluative and emotional stance, thereby bridging the personal and academic dimensions that characterise acknowledgements.

To address this gap, the present corpus-based study investigates cross-disciplinary variation in acknowledgements from Master of Arts (MA) and Master of Science (MS) theses, as well as PhD dissertations, written in English by native speakers of Turkish. It specifically examines linguistic features, with an emphasis on adjectives. By doing so, this study aims to address this often-neglected genre and to reveal whether disciplinary and degree-related factors shape expressions of gratitude in acknowledgements. The following sections present the theoretical framework and previous research, describe the corpus compilation and analysis procedures, report and interpret the results, and conclude by summarising the key insights and outline implications for future research.

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

Register vs Genre in Academic Discourse

Researchers occasionally use the terms *register* and *genre* interchangeably, a practice that has been identified as problematic despite the clear distinctions established in the literature (Fang & Cao, 2015). *Genre* is defined as "a class of communicative events, the members of which share some set of communicative purposes" (Swales, 1990, p. 58). In contrast, a register refers to a language variety associated with a specific situational context and characterised by particular communicative purposes (Biber, 2012). According to Biber and Conrad (2019, p. 6), a register comprises three core elements; situational context (spoken or written), linguistic features (lexical and grammatical characteristics), and the functional relationships between these two components. While identifying a genre can be relatively straightforward using distinct genre markers, registers are recognised through patterns of specific linguistic features such as lexical choices and grammatical categories (Biber & Conrad, 2019). Registers also vary in their level of specialisation, ranging from general to highly specialised. For instance, conversation represents a general register (Biber & Conrad, 2019), whereas doctor–patient interactions exemplify a more specialised register due to their contextual and topical specificity. Similarly, general academic writing constitutes a broad register while research articles targeted toward specific audiences represent specialised registers. Importantly, significant register differences exist among academic disciplines, and there is no single, universally appropriate analytical level when conducting register analysis (Biber & Conrad, 2019).

The components of situational context and linguistic features are central to register analysis. According to Biber and Conrad (2019), identifying the linguistic characteristics of a text is critical for conducting register analysis. A precise linguistic description of any register thus involves quantitative analyses that isolate and identify typical linguistic features within the text type (Biber, 2012). While certain linguistic elements, such as nouns, can appear in all texts, their frequency and prominence vary significantly across registers. For example, nouns occur considerably more frequent in textbook passages than in classroom teaching texts (Biber & Conrad 2019, p. 57).

Genre analysis, in contrast, focuses on linguistic features that characterise whole texts (Biber, 2012). Unlike linguistic features such as nouns or pronouns, genre features are typically infrequent, often appearing once in a text, usually at its beginning or end, and are therefore identified through comprehensive textual analysis (Biber, 2012). Despite their conventionalised structure, research articles typically possess few genre markers. Section labels like '*Introduction*' or *'Methodology'* serve as genre markers, appearing predictably within the article structure (Biber & Conrad, 2019). Moreover, each section of a research article can be characterised from a register perspective, since it employs distinctive linguistic features and their accurate description requires "the quantitative, comparative approach of register analysis" (Biber & Conrad, 2019, p. 131).

Drawing on a register-based approach (Biber & Conrad, 2019), the present study analyses academic discourse to identify linguistic patterns across disciplinary domains. It focuses on quantifiable linguistic features, particularly adjective use and frequency, in a compiled corpus of acknowledgements written in English by Turkish postgraduate writers.

Adjectives in Academic Discourse

Adjectives form a major lexical class in English, ranking as the third largest lexical class after nouns and verbs (Leech, 1989). Syntactically, adjectives typically function either attributively or predicatively. Put simply, attributive adjectives function by directly preceding the noun they modify, usually occurring between the determiner and the head of a noun phrase (Quirk et al., 1985). Predicative adjectives, on the other hand, function as distinct clause elements (Biber et al., 1999). They typically occur as subject predicatives following a copular verb as in (1), or as object predicatives in the following example (2):

(1)   *The results were not surprising.*
(2)   *They did not find the result surprising.*

Semantically, adjectives serve a variety of functions, such as descriptive, relational, and evaluative. Biber et al. (1999) suggest two broad semantic categories of adjectives; *classifiers* and *descriptors*. Descriptors are prototypical adjectives that designate inherent qualities, such as colour, size, age, or emotion. They are commonly gradable. Classifiers, on the other hand, serve to restrict or categorise the noun's referent in relation to other referents, and are generally non-gradable. They are further subdivided into relational classifiers, affiliative classifiers, and topical classifiers (Biber et al., 1999, pp. 508–509).

In addition to their syntactic roles and semantic categories, adjectives also vary in their discourse functions across registers. They are particularly frequent in written registers, especially academic prose (Biber et al., 1999). In the context of acknowledgements, adjectives play a crucial role in expressing the writer's feelings, attitudes, and evaluative opinions, thereby enhancing the personal and emotional tone of this section. Biber et al. (1999, pp. 510–511) observe that while descriptive adjectives are more common in fiction, academic prose relies heavily on classifiers, particularly *relational adjectives* such as *different, general*, and *major*, as well as *topical classifiers* like *social* and *economic*.

Considering these grammatical and semantic distinctions, this study examines the use of adjectives in postgraduate acknowledgements from a syntactic perspective. Special attention is given to their distribution across attributive and predicative positions. Focusing on adjectives is particularly relevant in the context of acknowledgements because they are salient linguistic resources for

51

Variation across Disciplines and Degrees in the Use of Adjectives in Postgraduate Acknowledgements Written in English by Turkish L1 Writers

conveying personal attitudes and evaluative meanings, which are central to the expression of gratitude. Examining adjective use, therefore, provides valuable insights into how writers balance personal emotion and academic convention across disciplines and degrees. By investigating how adjectives function within this semi-formal academic sub-register, the study aims to shed light on patterns of adjective use in acknowledgements across academic degrees and disciplines.

Studies on Acknowledgements

Research on acknowledgements has generally taken two complementary directions; genre-based analyses that describe rhetorical structure, and corpus-based investigations that examine linguistic realisations. Genre-analytic work, most notably Hyland's (2004) *three-move model of reflecting, thanking*, and *announcing*, has shaped subsequent research on the rhetorical organisation of acknowledgements. Developed from analyses of MA and PhD acknowledgements across six disciplines at Hong Kong universities, the model identifies recurring rhetorical patterns that writers employ to express gratitude and construct academic identity. Hyland (2004) observed that all acknowledgements followed recognisable text sequences corresponding to this structure and emphasised that thanking for academic support constituted the single obligatory and central move, reflecting the genre's primary communicative purpose.

Building on this framework, Loan (2017) examined 202 TESOL master's theses written by Vietnamese postgraduates and found that writers largely adhered to Hyland's move structure. However, compared with their Chinese-speaking peers, Vietnamese writers were more forthright and less reserved in expressing gratitude, suggesting that cultural background influences the level of emotional expression and interpersonal engagement in acknowledgements, a finding that underscores the role of sociocultural factors in shaping linguistic choices.

Beyond genre analysis, a smaller body of research has adopted corpus-based approaches from a register-based perspective to explore linguistic variation in acknowledgements. Chan (2015), for example, analysed stance expressions across disciplines using a corpus of 77,180 words drawn from 256 PhD dissertations written by Hong Kong Chinese students. The study revealed that soft-applied disciplines (Applied Linguistics, Business Studies, and Public Administration) exhibited a higher frequency of stance expressions than hard disciplines such as Biology, Computer Science, and Electronic Engineering. Chan (2015) also found that writers' stance choices were influenced by contextual factors, including research type, hierarchical relationships with addressees, institutional support, and strategic career considerations.

Similarly, Bao and Liu (2024) conducted a corpus-based comparative study examining five-word lexical bundles expressing gratitude in the dissertation acknowledgements of Chinese and American PhD students in linguistics. Their analysis showed that the Chinese writers employed a markedly greater number of gratitude bundles than their American counterparts. Although both groups relied mainly on verb-phrase-based constructions to convey appreciation, the Chinese students produced a higher proportion of noun-phrase-based bundles and fewer verb-phrase-based expressions.

Within the Turkish context, Atasever Belli (2019) examined acknowledgements in PhD dissertations written in English by native and non-native English speakers, as well as those written in Turkish by native speakers of Turkish. Focusing on the linguistic patterns employed across these three groups, she identified several shared tendencies, most notably the predominant use of *performative verbs* accompanied by *modal auxiliaries* when expressing gratitude. She further noted cross-linguistic differences in the organisation and linguistic realisation of gratitude; Turkish L1 acknowledgements tended to condense multiple addressees within a single clause, employing relatively few and repetitive thanking expressions, whereas acknowledgements written in English used more elaborated structures, nominalisations, and bare mentions to express gratitude.

Overall, while prior research has mapped the rhetorical organisation and cross-cultural variation of acknowledgements, few studies have examined the linguistic mechanisms through which gratitude is expressed. As adjectives play a key role in encoding writers' evaluative and affective stance, the present study addresses this gap by examining their use across degrees and disciplines.

The Present Study

Acknowledgements remain an underexplored academic genre, and relatively little is known about their linguistic features. Addressing this gap, the present study investigates the use of adjectives in acknowledgements written in English by Turkish L1 postgraduate writers, with a particular focus on their frequency, syntactic characteristics, and distribution across academic degrees and disciplinary domains.

Specifically, the study examines acknowledgements from MA/MS theses and PhD dissertations written in English by native speakers of Turkish. The corpus was compiled from two broad disciplinary domains; the hard sciences, including STEM (Science, Technology, Engineering, and Mathematics) and the soft sciences, comprising HSS (Humanities and Social Sciences). The STEM subcorpus includes theses and dissertations from fields such as *Metallurgy, Physics, Electrical and Electronics Engineering, Mechanical Engineering, Computer Engineering, Biology, Mathematics, Chemical Engineering,* and *Industrial Engineering*. The HSS subcorpus includes theses and dissertations from disciplines such as *English Language Teaching*, *Educational Sciences*, *English Literature*, *History, Philosophy, Psychology, Sociology, Political Science and Public Administration*, and *Business Administration*. Further details on the corpus are provided in the methodology section.

Beyond disciplinary variation, postgraduate study leading to an MA/MS or a PhD could be a demanding and emotional journey. Given the amount of time, effort, and resources involved, pursuing a PhD represents a major life decision (Hunter & Devine, 2016). Doctoral students and their families experience substantial changes once they embark on a graduate programme. According to Kubanyiova (2012), it is an emotionally charged process, and postgraduate students are likely to experience both positive and negative emotions throughout it. Consequently, given the lengthy and rigorous nature of doctoral study, it is hypothesised that the acknowledgement sections in PhD dissertations are likely to be longer and contain a higher frequency of adjectives than those in MA and MS theses.
The present study is guided by the following research questions:

1. What adjectives are most frequently used across academic degrees (MA/MS vs. PhD) and disciplinary domains (STEM vs. HSS)?
2. What are the syntactic characteristics (attributive vs. predicative) of the most frequently used adjectives?
3. To what extent does adjective use differ between academic degrees (MA/MS vs. PhD)?
4. To what extent does adjective use differ across disciplinary domains (STEM vs. HSS)?

METHODOLOGY

Corpus Compilation

The data for this study were sourced from the Council of Higher Education (CoHE) National Thesis Centre, the official repository of postgraduate theses/dissertations in Türkiye (CoHE, 2025). The centre archives MA, MS, PhD, and other postgraduate theses/dissertations (e.g. medical specialization, and dentistry theses) submitted to Turkish universities (both public and private), and allows public access through advanced search filters (thesis type, access status, language, and discipline).

For the purposes of this study, the detailed search function was used, as it allows filtering by thesis type, access status, language, and academic field. In particular, the language filter was applied to identify theses and dissertations written in English, typically produced at universities where English is the medium of instruction. Some theses and dissertations did not include an acknowledgement section and were identified manually through individual review. The acknowledgement sections of the selected theses and dissertations, downloaded in PDF format, were manually copied and transferred into plain text files for analysis. These text files (.txt) collectively form the raw data for the study.

As observed during manual review, the raw data were noisy and required careful manual cleaning. Several acknowledgements, particularly those in theses supported by institutional or national research organisations, included overly technical information such as project codes or formal grant statements (see 3). These were excluded from the dataset, as they were not relevant to the present

53

Variation across Disciplines and Degrees in the Use of Adjectives in Postgraduate Acknowledgements Written in English by Turkish L1 Writers

analysis. However, general references to funding institutions, as can be seen in (4) below, were retained, as they reflect the writer's voice and evaluative stance. In addition, typographical errors (see 5a and 6a) and inconsistent punctuation, such as repeated ellipses (see 7a), were identified in the data and corrected to ensure textual consistency. Following the cleaning process, the entire dataset was thoroughly reviewed to eliminate any remaining inconsistencies. The following examples illustrate the original extracts alongside their cleaned versions:

Original extract:

(3)   *This thesis was supported by Marmara University Research Foundation-BAPKO (Projects: FEN-C-YLP- 000000-0000) and 2210-C 2019/1 TUBITAK Priority Areas Domestic Master Scholarship Program.* (excluded from the dataset)

Original extract:

(4)   *I own a big thank to TÜBİTAK, which financially supported me during this journey.*

Original extract:

(5a)   *I would also like to express my great appreciation to Assoc. Prof. Dr. X for his invaluably constructive criticism, and friendy advice.*

Edited extract:

(5b)   *I would also like to express my great appreciation to Assoc. Prof. Dr. X for his invaluably constructive criticism, and friendly advice.*

Original extract:

(6a)   *I am indebted to the stories of powerful African Amrican women whose experiences made this thesis possible.*

Edited extract:

(6b)   *I am indebted to the stories of powerful African American women whose experiences made this thesis possible.*

Original extract:

(7a)   *To finish with, a wise man once articulated the following words, "I want to thank me for believing in me, . . . doing all this hard work, . . . having no days off, ... never quitting, . . . for always been a giver and trying to give more than I receive, . . . trying to do more right than wrong. I want to thank me for just being me at all times".*

Edited extract:

(7b)   *To finish with, a wise man once articulated the following words, "I want to thank me for believing in me, doing all this hard work, having no days off, never quitting, for always been a giver and trying to give more than I receive, trying to do more right than wrong. I want to thank me for just being me at all times."*

Design of the Corpus ACK-CO

A total of 256 acknowledgements were collected to compile the ACK-CO (Acknowledgement Corpus) for the present study, representing the final dataset analysed. The compilation process was labour-intensive, involving manual selection, extraction, and preparation of the texts. As shown in Figure 1, the main corpus consists of four separate subcorpora, each containing 64 acknowledgements written by an equal number of male (M) and female (F) writers. Although gender was not analysed as a variable in this study, the balance was maintained to enhance representativeness and internal consistency in the corpus design. The four subcorpora represent two academic degrees (MA/MS and PhD) and two disciplinary domains (STEM and HSS). Together they comprise approximately 81,150 tokens, forming a balanced dataset for quantitative comparison across degrees and disciplines.

Figure 1. Design of the ACK-CO
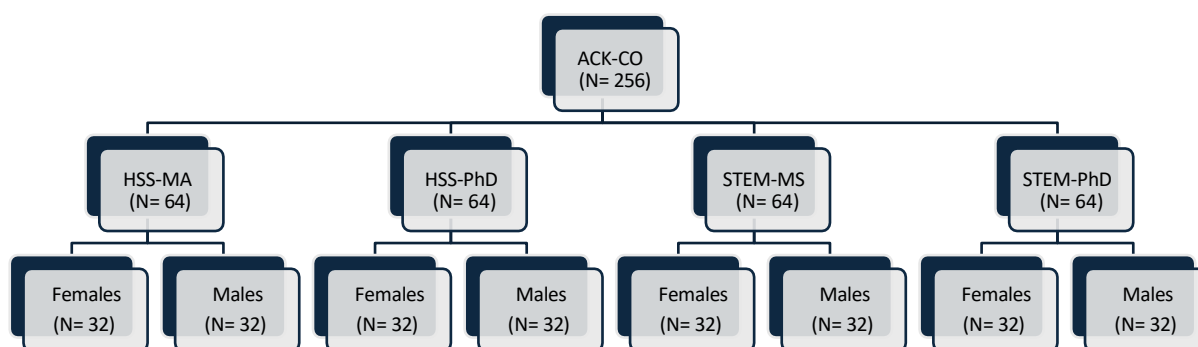
Data Analysis

The data were analysed using R Statistical Software (v4.1.2; R Core Team, 2021). Before addressing the research questions, a descriptive analysis of the ACK-CO corpus was conducted to provide an overview of the dataset. Both the total number of tokens and the mean text length per acknowledgement were calculated for each subcorpus in R. Part-of-speech (POS) tagging was applied to identify adjectives in the corpus, and descriptive statistics were conducted to address the first research question concerning the frequency and distribution of adjectives across academic degrees and disciplinary domains.

To address the second research question, which examined the syntactic characteristics of the most frequently used adjectives, the corpus was uploaded to Sketch Engine (Kilgarriff et al., 2014). Using the Word Sketch tool, the most common adjectives were analysed in context to determine their syntactic role, specifically, whether they were used attributively or predicatively. Attributive adjectives were identified when modifying a following noun within the same noun phrase (e.g., *my sincere thanks*), whereas predicative adjectives were coded when linked to a copular verb (e.g., *I am grateful* or *his expertise on the subject has made this work more valuable*). Each instance was manually verified within its concordance lines to ensure contextual accuracy. The results were visualised and presented in figures.

While the present study relies on POS tagging to identify adjectives, it is important to note that earlier research has used different categorisation criteria. Atasever Belli (2019)**,** for example, classified adjectives such as *special* and *deepest* as 'intensifiers' because of their amplifying semantic function. In contrast, the current analysis treats such items as adjectives occurring within adjective–noun constructions, since the classification here is based on their syntactic role rather than their semantic or pragmatic function. Although these adjectives certainly perform an intensifying role in meaning (e.g., *special thanks, deepest gratitude*), their grammatical status remains adjectival within corpus-annotation conventions.

For the third and fourth research questions, Chi-square tests of independence were run to examine whether there was a statistically significant association between adjective use and academic degrees (MA/MS vs. PhD) or disciplinary domains (HSS vs. STEM).

55

Variation across Disciplines and Degrees in the Use of Adjectives in Postgraduate Acknowledgements Written in English by Turkish L1 Writers

RESULTS AND DISCUSSION

Overview of the ACK-CO

This section presents basic descriptive statistics to provide an overview of the corpus prior to the detailed analysis. The ACK-CO corpus comprises 256 acknowledgement texts containing a total of 81,153 tokens. Table 1 shows the token distribution across subcorpora and the mean text length for each group.

Table 1. **Token distribution across subcorpora in the ACK-CO**

Subcorpus	Files	Total tokens	Mean text length (tokens)
HSS-MA-Females	32	8,342	260.7
HSS-MA-Males	32	8,564	267.6
HSS-PhD-Females	32	16,505	515.8
HSS-PhD-Males	32	13,336	416.8
STEM-MS-Females	32	6,858	214.3
STEM-MS-Males	32	6,915	216.1
STEM-PhD-Females	32	9,666	302.1
STEM-PhD-Males	32	10,967	342.7
Total	256	81,153	

The results support the hypothesis that acknowledgements in PhD dissertations are longer than those in MA/MS theses. The longest texts were found in the HSS-PhD domain, with a mean length of 515.8 tokens, followed by those in the same domain written by other PhD writers (416.8 tokens). Although acknowledgements in the STEM-PhD group were also longer than those at the MA/MS level, they were relatively more concise than HSS-PhD texts.

Frequency of Adjectives across Academic Degrees and Disciplines

Descriptive analyses were conducted in R (v4.1.2; R Core Team, 2021). For each subcorpus, the total number of tokens and adjectives (tagged as *JJ*) was calculated. Because the subcorpora varied in length, normalised frequencies (adjectives per 1,000 tokens) were computed to enable meaningful comparison. In addition to overall frequency, the number of unique adjective types was identified to examine lexical diversity across academic degrees and disciplines. Table 2 summarises these descriptive statistics.

As shown in Table 2, both the total number of tokens and adjectives were higher in the PhD subcorpora than in the MA/MS subcorpora across disciplines. The mean text length also differed substantially; PhD acknowledgements averaged 466.3 tokens in HSS and 322.4 tokens in STEM, compared with 264.2 and 215.2, respectively, at the MA/MS level. In addition, the normalised frequency of adjectives (per 1,000 tokens) was slightly higher in the PhD subcorpora (71.81 in HSS and 67.62 in STEM) than in their MA/MS counterparts (67.02 and 62.30, respectively). These results suggest that doctoral acknowledgements might not be only longer but also denser in adjectival content, indicating more elaborate and lexically varied expression. This finding supports earlier observations that acknowledgements in PhD dissertations tend to be longer and more elaborate in their language use than those in MA/MS theses (Hyland & Tse, 2004). The greater length and adjective density may reflect broader supervisory networks, extended research duration, and a more emotionally charged doctoral experience, which could encourage richer evaluative language.

Table 2. Descriptive statistics of adjective use across subcorpora

Subcorpus	Total tokens	M text length	Total *JJ*	Unique *JJ*	*JJ* per 1,000 tokens
HSS-MA	16,906	264.2	1,133	319	67.02
HSS-PhD	29,841	466.3	2,143	514	71.81
STEM-MS	13,773	215.2	858	256	62.30
STEM-PhD	20,633	322,4	1,395	352	67.62
Total	81,153		5,529	1,441	

The frequency of adjectives was calculated for each subcorpus, and the results were tabulated (see Appendix A). Figure 2 provides a comparative analysis of the 15 most frequently used adjectives in the HSS-MA and HSS-PhD subcorpora to illustrate the distribution of adjective use. The analysis shows that *grateful, special*, and *valuable* were consistently prevalent across both degree levels. However, adjectives such as *academic*, *invaluable*, *constructive*, and *possible* occurred more frequently in the PhD subcorpus, possibly reflecting a more formal and academically oriented tone. By contrast, adjectives such as *precious* and *last* were unique to the MA acknowledgements, perhaps indicating more personal or reflective expressions. Additionally, *long* and *best* appeared exclusively in the PhD data. The adjective *long* may relate to the temporal dimension of doctoral research, reflecting references to the duration or process of study (e.g., *a long journey*), while *best* typically functions as an evaluative intensifier (e.g., *my best supervisor*), aligning with the more formal and achievement-oriented style observed in doctoral acknowledgements.

Figure 2. 15 most frequent adjectives in HSS-MA and HSS-PhD acknowledgements
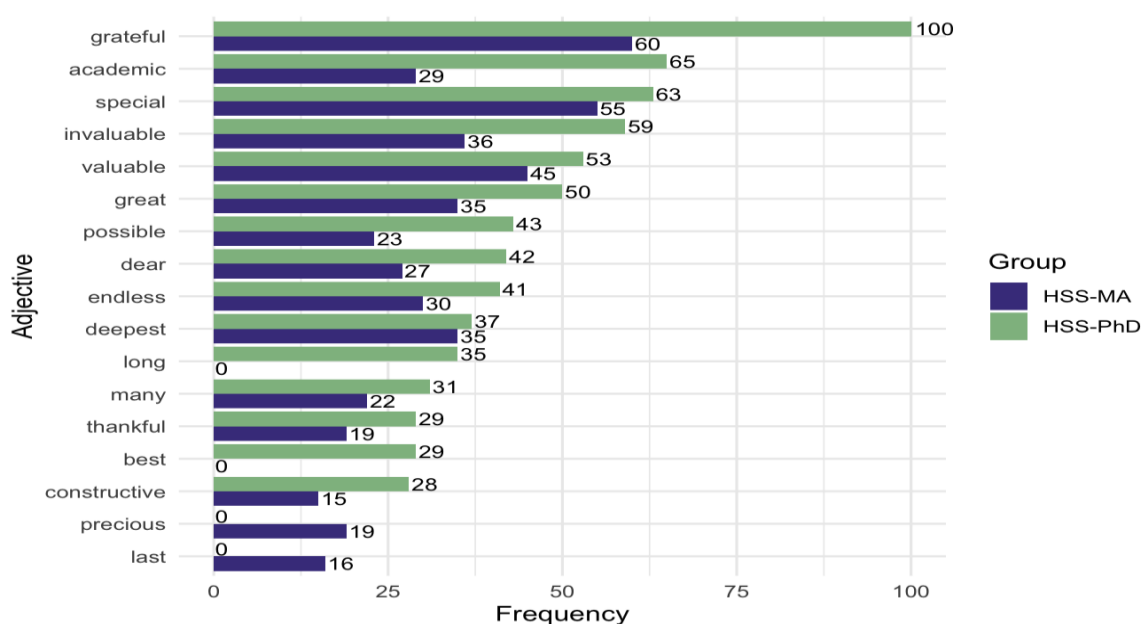
These findings resonate partly with Atasever Belli's (2019) corpus-based analysis of thesis and dissertation acknowledgements written by Turkish and non-Turkish postgraduate writers in the Social Sciences. She found that Turkish writers who composed their acknowledgements in English, as non-native English speakers, employed a wider range of intensifying adjectives (e.g., *special*, *endless*, *deepest*) than both native English writers and Turkish writers composing in their L1. This tendency suggests that expressing gratitude in a second language may encourage greater lexical variation and affective elaboration.

57

Variation across Disciplines and Degrees in the Use of Adjectives in Postgraduate Acknowledgements Written in English by Turkish L1 Writers

Figure 3 displays the adjectives used in the STEM acknowledgements. As in the soft sciences, *grateful* was the most frequently used adjective in both subcorpora, with a notably higher frequency in PhD acknowledgements (*N* = 65) compared to MS (*N* = 44), indicating a stronger emphasis on gratitude at the doctoral level. However, when compared with the HSS-PhD subcorpus, where *grateful* reached a frequency of 100, the STEM data may indicate a more restrained expression of affect. These findings support the hypothesis that acknowledgements in PhD dissertations contain a greater number of adjectives than those in MA and MS theses and further suggest that disciplinary conventions might shape how gratitude and affect are linguistically realised. Writers in the soft sciences appear to employ more affectively charged expressions than their counterparts in the hard sciences, where the expression of gratitude tends to be more restrained. It is possible that the lack of institutional and academic engagement among master's students could be the reason for the shorter acknowledgements in MA and MS theses found in this study. As Hyland and Tse (2004) observed, master's students often study part-time and complete their theses alongside substantial coursework, which may reduce their investment in academic conventions. Consequently, they are more likely to see acknowledgements as a "formal convention of little significance" (Hyland & Tse, 2004, p. 262).

Figure 3. 15 most frequent adjectives in STEM-MS and STEM-PhD acknowledgements
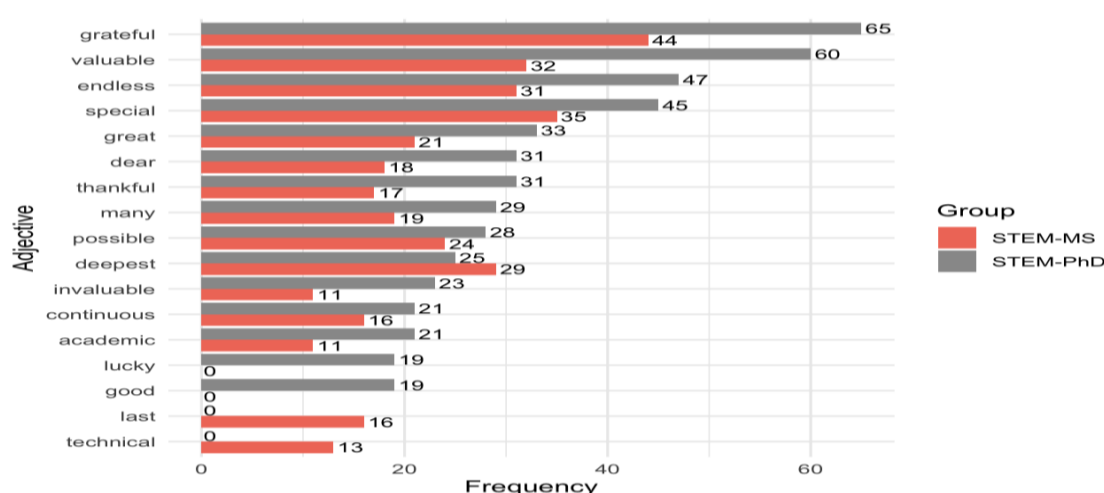
## Syntactic Patterns of the Most Frequently Used Adjectives

To address the second research question, which examined the syntactic characteristics of frequently used adjectives, five adjectives (*grateful, special, valuable, great,* and *possible*) were selected for detailed analysis, as they occurred consistently across all four subcorpora. Two additional adjectives, *invaluable* and *academic*, also appeared across subcorpora but were excluded due to lower and/or uneven frequencies. Using the Word Sketch tool in Sketch Engine (Kilgarriff et al. 2014), each adjective was examined for its predominant syntactic role, specifically whether it occurred in attributive or predicative positions. While Figure 4 illustrates the Word Sketch outputs for *great* and *grateful* as representative examples, similar analyses were conducted for *special, valuable,* and *possible.* Their respective visualisations are provided in Appendix B.

The data indicated that attributive use was overwhelmingly dominant across most adjectives. For instance, *special* (*N* = 195) and *great* (*N* = 172) appeared mainly in attributive constructions such as *special thanks, special appreciation,* and *great support* (see Figure 4). As shown in examples (8) and (9), both adjectives typically modify nouns referring to expressions of gratitude or appreciation, highlighting their evaluative and affective role within acknowledgment discourse.

(8)   *Additionally, I owe special thanks to X*
(9)   *It gives me great pleasure to acknowledge the support and help of my supervisor Y*

Figure 4. Word Sketch output for *grateful* and *great*
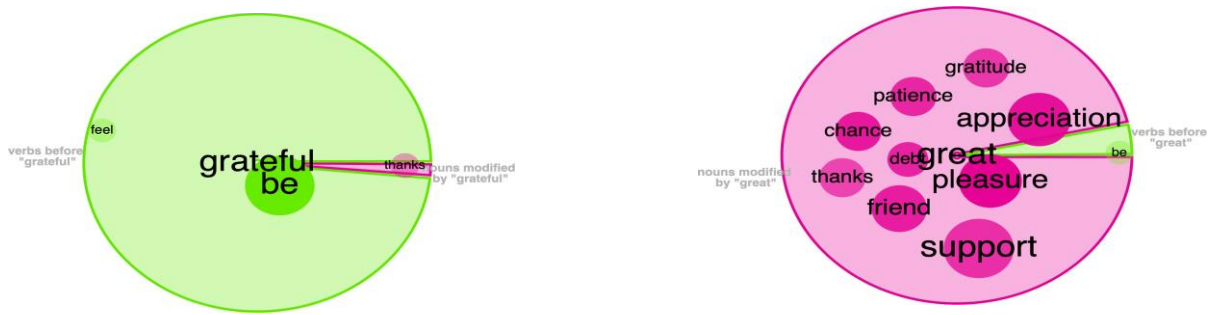
There were 183 instances of *valuable* in attributive roles (see Appendix B), frequently modifying abstract nouns such as *feedback, comment, contribution,* and *guidance.* Examples from the corpus (ACK-CO) include "*I feel so lucky to complete this thesis through her valuable guidance and wisdom.*" This distribution highlights the predominant use of *valuable* in expressing appreciation for academic contributions, reflecting its evaluative orientation within acknowledgment discourse.

In contrast, *grateful* occurred 263 times in predicative and only 6 times in attributive position, typically following copular verbs (e.g., *be grateful*). This can be seen in the following examples, "*I am also grateful to my friends for their continuous support during the whole process of this study and the encouragement they gave when it became hard for me to continue to study*" and "*I am very grateful to XX for his participation in my examining committee and suggestions.*" This pattern can be seen as presenting gratitude as a personal stance rather than an attribute of an entity, highlighting its affective and interpersonal nature.

Possible was also used primarily in predicative position, with 118 predicative and only eight attributive instances, reflecting its causal and epistemic meaning rather than affective evaluation. As seen in examples (10) and (11), it frequently appeared in passive constructions such as *was made possible by* or *would not have been possible without*, acknowledging enabling factors or individuals. Overall, these patterns indicate clear syntactic preferences across adjectives and are consistent with Biber et al. (1999) and Biber and Conrad (2019), who observed that attributive adjectives occur far more frequently than predicative ones in academic prose.

(10)   *This research would not have been possible without them.*
(11)   *Without her, it would not have been possible for me to start this process.*

Comparison of Adjective Frequency by Academic Degrees

A chi-square test was run to examine whether there was a statistically significant difference in the frequency of adjectives across academic degrees. The result of the statistical analysis, $\chi2$ (1, N = 46,747) = 3.73, p = .053, indicated that the difference in adjective use between HSS-MA and HSS-PhD acknowledgements was not statistically significant. Since the result was very close to the standard level of significance ($p < .05$), it may suggest a slight tendency toward higher adjective use in acknowledgements in PhD dissertations compared to those in MA theses.

A nearly identical result was obtained for the STEM subcorpora. The chi-square test for STEM-MS and STEM-PhD acknowledgements yielded a similar result, $\chi2$ (1, N = 34,406) = 3.73, p = .054, showing no statistically significant difference.

Although the chi-square results did not reach statistical significance, the near-threshold p-values suggest a modest tendency for acknowledgements in PhD dissertations to include more adjectives than those in MA/MS theses. This trend aligns with the descriptive findings reported earlier and may indicate that doctoral writers express gratitude and evaluation more elaborately due to their prolonged engagement with research and supervision.

Comparison of Adjective Frequency across Disciplinary Domains

To determine whether there was a significant variation in adjective use across disciplines, a chi-square test was run. The test revealed a statistically significant difference in adjective frequency between the HSS and STEM subcorpora, χ^2 (1, N = 81,153) = 6.52, p = .011. In contrast to the STEM disciplines, the HSS fields' acknowledgements contained a greater number of adjectives. This finding is parallel with Biber and Gray (2016), who observed that attributive adjectives are typically less common in scientific academic writing (e.g. biochemistry text) and considerably more frequent in humanities texts.

Figure 5. Adjective frequency (per 1,000) across discipline domains
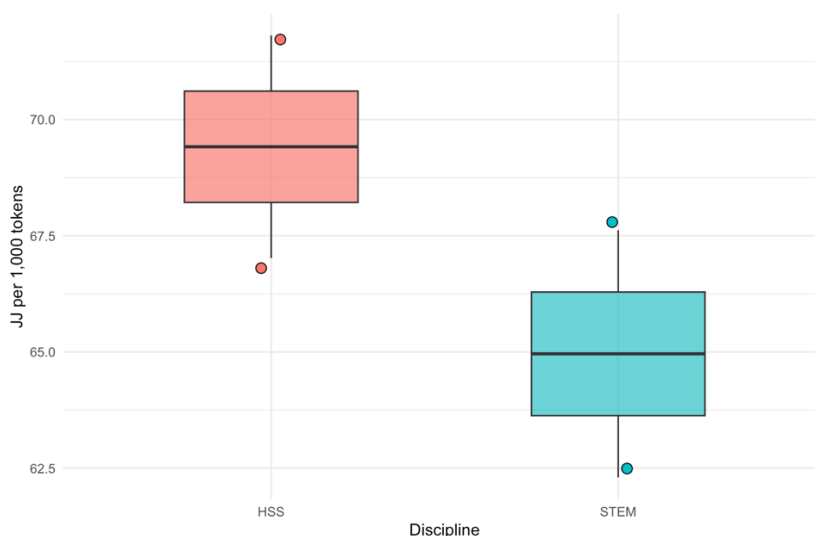
This quantitative pattern is further illustrated in Figure 5, which presents a boxplot comparing the normalised frequency of adjectives (per 1,000 tokens) across disciplines. Both data points from the HSS subcorpora (MA and PhD) exceed those from the STEM subcorpora, indicating a consistently higher frequency of adjective use in soft science acknowledgements.

The statistically significant disciplinary difference suggests that writers in the soft sciences may use more adjectives (many of which convey evaluative or affective meanings) than those in the hard sciences. Previous research has shown that adjectives can function as key linguistic resources for expressing evaluation and affect in academic writing (Biber, 2006; Biber & Conrad, 2019; Hyland, 2005). As noted by Biber and Gray (2016), scientific writing tends to favour nominal structures, which may partly account for the lower frequency of adjectives in STEM acknowledgements. In contrast, writers in the humanities and social sciences appear more inclined to use adjectives to express appreciation and interpersonal warmth, a pattern also observed by Chan (2015) in her analysis of attitudinal adjectives in soft-science acknowledgements. Overall, the greater use of adjectives in HSS acknowledgements could reflect a preference for a more personal and affectively expressive writing style characteristic of soft-science discourse.

CONCLUSION AND SUGGESTIONS

This study investigated the use of adjectives in thesis and dissertation acknowledgements, focusing on their frequency, syntactic characteristics, and distribution across academic degrees and disciplinary domains. The findings revealed a slight but consistent increase in adjective frequency in acknowledgements written in PhD dissertations compared to those written in MA/MS theses across both the HSS and STEM subcorpora. Although chi-square tests did not show a statistically significant difference by academic degree, the descriptive results suggested a modest tendency toward higher adjective density in doctoral acknowledgements. In contrast, the disciplinary comparison yielded a statistically significant difference, showing that acknowledgements in the HSS contained more

adjectives overall than those in STEM fields. This difference was also evident in the normalised frequency data and visualised in the boxplot. The syntactic analysis further showed a strong preference for attributive constructions among the most frequent adjectives such as *special, valuable,* and *great* while *grateful* and *possible* appeared predominantly in predicative position. These patterns align with previous findings revealing that attributive adjectives with affective or evaluative meanings are more common in the soft sciences.

One possible explanation for these patterns is that doctoral research typically involves longer research trajectories, broader supervisory networks, and stronger interpersonal engagement, which may encourage more elaborate and affectively rich expressions of gratitude. Similarly, disciplinary differences may reflect contrasting epistemological traditions, with HSS fields placing greater emphasis on personal positioning and evaluative stance. Taken together, the results suggest that both academic degree and disciplinary domain might influence how writers employ adjectives to express gratitude and evaluation in acknowledgements.

The corpus analysed in this study consisted solely of acknowledgements written in English by Turkish L1 postgraduates, which limits the generalisability of the findings. Moreover, the analysis focused exclusively on adjectives and their syntactic characteristics, without addressing potential variation related to gender or identity, or examining their semantic classification. Future research could therefore expand the scope of the study by exploring whether factors such as gender identity, cultural background, and academic setting influence the linguistic expression of gratitude in acknowledgements. Further comparative analyses might also examine variation across gender identities, linguistic backgrounds, and cultural contexts, extending beyond degree levels and disciplinary boundaries. Cross-cultural investigations involving EFL writers from different educational backgrounds would further shed light on whether cultural norms and institutional practices shape expressions of gratitude in postgraduate writings.

REFERENCES

Altakhaineh, A. R. M., Younes, A. S., & Allawama, A. (2024). A corpus- driven study of gratitude in English acknowledgements by Arabic-speaking MA students: constructing L2 academic writer identity. *Cogent Arts & Humanities, 11*(1), 1–13. https://doi.org/10.1080/23311983.2024.2346361

Atasever Belli, S. (2019). Linguistic patterns in PhD acknowledgements written in Turkish and English. *The Asian ESP Journal, 5*(1.1), 141–167.

Bao, K. & Liu, M. (2024). A contrastive study of lexical bundles expressing gratitude in dissertation acknowledgements produced by Chinese and American PhD students of linguistics. *Sage Open, 14*(1), 1–15. https://doi.org/10.1177/21582440241239164

Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Grammar of spoken and written English.* Pearson Education Limited.

Biber, D. (2006). *University language: A corpus-based study on spoken and written registers.* John Benjamin Publishing Company.

Biber, D. (2012). Register and discourse analysis. In J. P. Gee & M. Handford (Eds.), *The Routledge handbook of discourse analysis (*pp. 191–208). Routledge.

Biber, D. & Gray, B. (2016). *Grammatical complexity in academic English.* Cambridge University Press.

Biber, D. & Conrad, S. (2019). *Register, genre, and style* (2nd ed.). Cambridge University Press.

Chan, T. H. T. (2015). A corpus-based study of the expression of stance in dissertation acknowledgements. *Journal of English for Academic Purposes, 20*(4), 176–191. https://doi.org/10.1016/j.jeap.2015.09.005

Cheng, S. W. (2012). A contrastive study of master thesis acknowledgements by Taiwanese and North American students. *Open Journal of Modern Linguistics, 2*(1), 8–17. doi: 10.4236/ojml.2012.21002

CoHE. (2025). *Council of Higher Education Theses Centre.* (https://tez.yok.gov.tr/UlusalTezMerkezi/, accessed 1–15 April 2025.)

61

Variation across Disciplines and Degrees in the Use of Adjectives in Postgraduate Acknowledgements Written in English by Turkish L1 Writers

Fang, C. A. & Cao, J. (2015). *Text genres and registers: The computation of linguistic features.* [eBook edition]. Springer. https://ebookcentral.proquest.com/lib/thulbjena/detail.action?docID=1966074

Hunter, K. H. & Devine, K. (2016). Doctoral students' emotional exhaustion and intentions to leave academia. *International Journal of Doctoral Studies,* 11, 35–61. https://doi.org/10.28945/3396

Hyland, K. (2003). Dissertation acknowledgements: The anatomy of a Cinderella genre. *Written Communication, 20*(3), 242–268. https://doi.org/10.1177/0741088303257276

Hyland, K. (2004). Graduates' gratitude: the generic structure of dissertation acknowledgements. *English for Specific Purposes, 23*(3), 303–324. https://doi.org/10.1016/S0889-4906(03)00051-6

Hyland, K. & Tse, P. (2004). Acknowledgements in graduate dissertations. *International Journal of Applied Linguistics, 14*(2), 259–275. https://doi.org/10.1111/j.1473-4192.2004.00062.x

Hyland, K. (2005). *Metadiscourse: Exploring interaction in writing.* Continuum.

Kilgarriff, A. V. B., Bušta, J., Jakubíček, M., Kovář, V., Michelfeit, J., Rychlý, P., & Suchomel, V. (2014). The Sketch Engine: ten years on. *Lexicography,* 1, 7–36.

Kubanyiova, M. (2012). *Teacher development in action: Understanding language teachers' conceptual change.* Palgrave Macmillan.

Kuhi, D. & Rezaei, S. (2014). An analysis of generic features of acknowledgements in academic writing: Native speakers of English vs. non-native (Iranian). *International Journal of English Linguistics, 4*(1), 19–43. http://dx.doi.org/10.5539/ijel.v4n1p19

Leech, G. (1989). *An A-Z of English grammar & usage.* Nelson.

Loan, N. T. T. (2017). Generic structures and linguistic features of TESOL master's thesis acknowledgements written by Vietnamese postgraduates. *3L: The Southeast Asian Journal of English Language Studies, 23*(2), 27–40. http://doi.org/10.17576/3L-2017-2302-03

Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). *A comprehensive grammar of the English language.* Longman.

R Core Team. (2021). *R*: *A language and environment for statistical computing.* Version 12.1.0. Vienna: *R* Foundation for Statistical Computing. (https://www.r-project.org, accessed 18 October 2024.)

Swales, J. M. (1990). *Genre analysis: English in academic and research settings.* Cambridge University Press.

Yang, W. (2012). A genre analysis of PhD dissertation acknowledgements across disciplinary variations. *LSP Journal, 3*(2), 51–70.

Zare-ee, A. & Hejazi, S. Y. (2019). Acknowledgement structure in Persian and English theses and dissertations: A contrastive genre analysis. *Arab World English Journal, 10*(1), 347–360. https://dx.doi.org/10.24093/awej/vol10no1.29
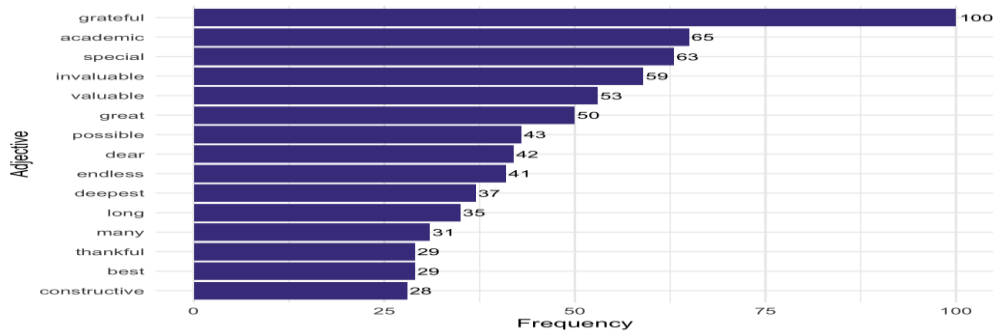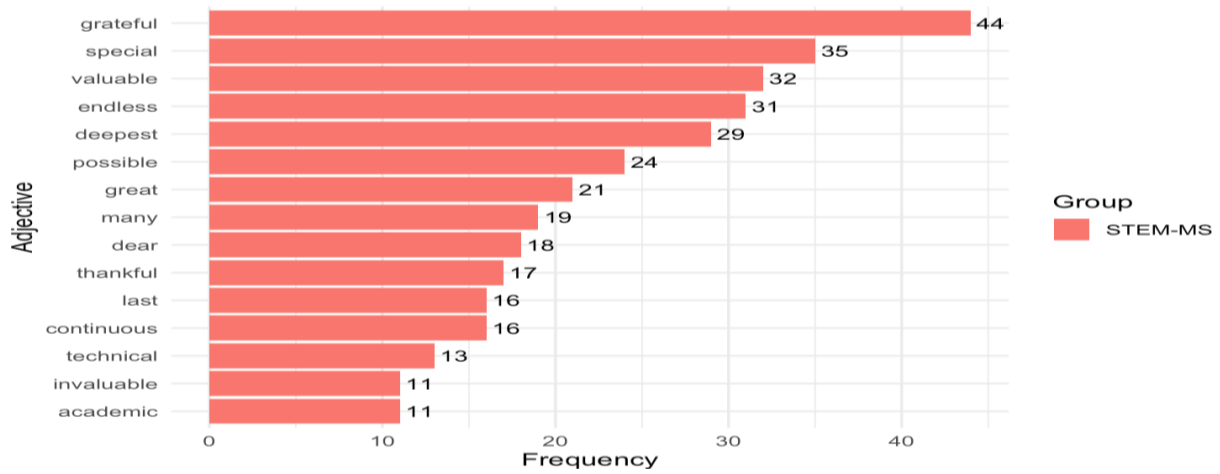
Appendices
Appendix A
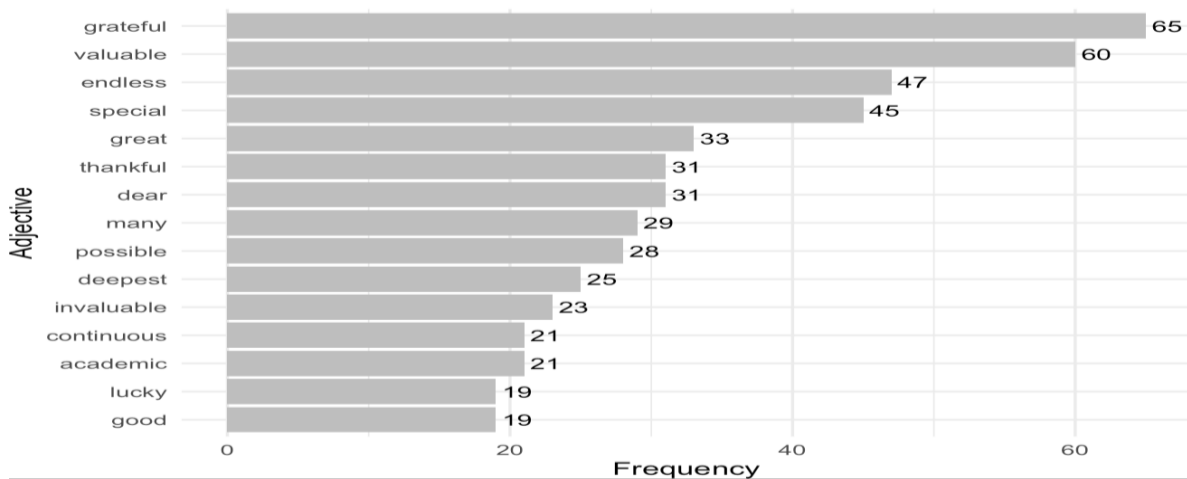
Top 15 adjectives in HSS-MA acknowledgements
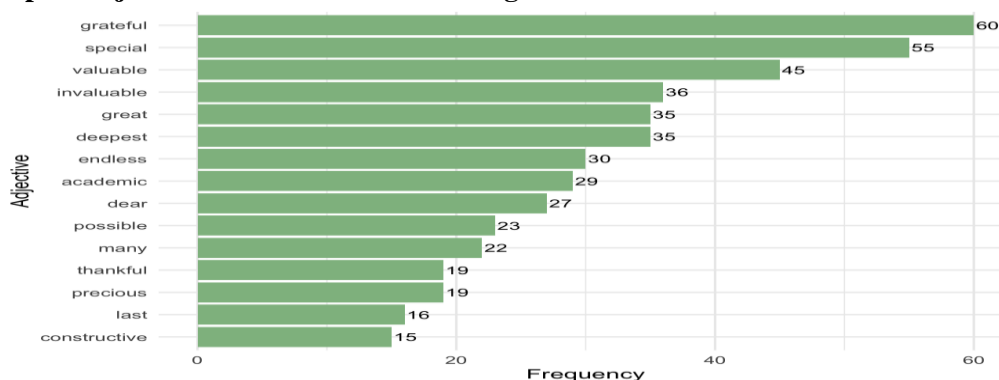
Top 15 adjectives in HSS-PhD acknowledgements

Top 15 adjectives in STEM-MS acknowledgements
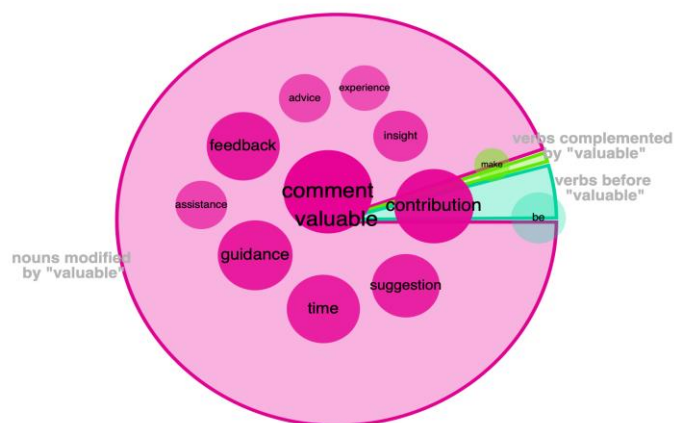

Top 15 adjectives in STEM-PhD acknowledgements

63

Variation across Disciplines and Degrees in the Use of Adjectives in Postgraduate Acknowledgements Written in English by Turkish L1 Writers

Appendix B

Word Sketch Outputs

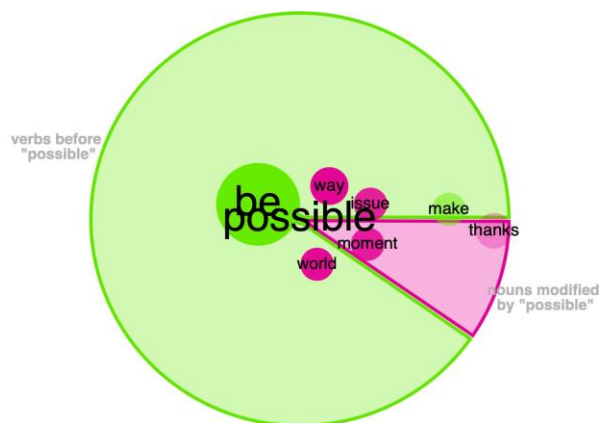*visualization by*

visualization by SKETCH ENGINE

visualization by SKETCH ENGINE