

## HEDGES AND BOOSTERS IN STUDENT SCIENTIFIC ARTICLES WITHIN THE FRAMEWORK OF A PRAGMATIC METADISCOURSE

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Article Info	Abstract
<b>Article History</b> Received: August 2023 Revised: September 2023 Published: October 2023	<i>The ability of students to edit scientific papers is still low, especially in mastering the use of hedge (fencing devices) and boosters (strengthening devices). Hedges and boosters are forms of expression of the author's attitude towards propositional content through epistemic modalities. This study aims to describe hedges and boosters in student scientific articles within the framework of a pragmatic metadiscourse. A qualitative descriptive approach was used in this study. The data used is in the form of editing words, sentences, and paragraphs in scientific articles editing courses. The source of this research data is a scientific article by PGRI Adi Buana University Surabaya students in 2022. Data collection techniques use documentation techniques and recording techniques. Data analysis techniques to identify hedges and word lists of boosters using the AntConc application built by Lawrence Anthony. Data that has been obtained from the AntConc application found the frequency of hedges and boosters in scientific articles. The results of this study showed that the use of modal verb hedges in the first position was 214 frequencies, followed by 59 adverbs of hedges, and verb hedges were 3 frequencies, while the use of booster in the first position was 202 frequencies, followed by adverbs booster of 63 frequencies, and booster verbs of 6 frequencies. This study shows that students ability to tendency to (1) use epistemic modalities in modal verbs, (2) tend to use more capital verbs that mean certainty and possibility, and (3) tend to use adverbs to mean epistemic modalities.</i>
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### INTRODUCTION

Editing is the process of correcting, perfecting, and changing the content of the language presentation in a text so that it is suitable for publication. Amalia (2021) stated that editing is the activity of preparing manuscripts to be published in printed form by paying attention to the presentation system. The purpose of editing is to ensure that data and facts are conveyed, accurately, and do not violate norms and religion. In addition, editing the manuscript is needed to increase the allure and understand the scriptwriter's messaging activities should be mastered by students so that education courses can be given to students, especially the Indonesian Education study program. The learning achievement of the editing course is so that students can implement ways or actions of editing, correcting, and editing scripts or films. The essence of editing comes from the root word edit giving birth to the derivative forms edit (verb), and editor (noun). The purpose of this editing is, (1)

preparing to prepareript ready for print or ready for publication by taking into account the systematic aspects of presentation, content, and language (regarding spelling, diction, and sentence structure); (2) to plan and to direct publishing (newspapers, magazines); (3) compiling and assembling (film, tape) by dismembering and reassembling (Amalia, 2021).

This editing lecture is given to students in semester VIII so that they can be applied in the world of work, as Indonesian teachers, editors, journalists, reporters, and journalists. This is supported by the concept of Merdeka Belajar-Kampus Merdeka offered by the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) known as the "Indian pendent campus". The program provides opportunities for students to improve their abilities according to their interests and talents when entering the world of work (<https://kampusmerdeka.kemdikbud.go.id/>). One of the Merdeka Belajar programs is a Certified Internship. Students can intern in print and non-print media publishing. Before the internship students, students get provisions about script editing. Students carry out manuscript editing activities in terms of language. For example, spelling and systematics, grammar and writing, diction, sentence structure, and content of the material. In a manuscript, editing is very important because good and correct writing makes information clear to the reader. The editor of the manuscript is an intermediary between the author and the reader because of the importance of the editor's function as a liaison, so between writer-editor-reader must be one tone, one rhythm, and one wave.

The author's relationship with the reader can be realized by the existence of a *metadiscourse* perspective that shows their attitude towards content and text readers in producing self-projection into certain discourses (Oktay, 2020). From this, it is obtained an understanding that social interaction and engagement between writers and readers can encourage interactional aspects of language use. *Metadiscourse* is a linguistic resource used to regulate the discourse or attitude of the author towards the content or its readers (Hidayati, 2020; Hyland, K., & Tse, 2004). Hyland (2010) further emphasizes that *metadiscourse* offers an alternative for writers and speakers to express themselves, interact, and negotiate with readers or listeners to intentionally influence them. Hyland developed his ideas on academic writing and explained that this new understanding of *metadiscourse* reveals the fact that authors use a certain set of linguistics not only to create texts that refer to external reality but also to show 'credible representations of themselves and their work and to build relationships with readers.'

Students learning about manuscript editing are concerned with how writers evaluate and assess their own experiences and how confident they are in expressing their attitudes to the text. Hedges and boosters are categorized as interactional *metadiscourses* (Triyoko, H, I Dewa Putu Wijaya, Praptomo, 2021). *Hedging* and *boosting* devices serve as tools for evaluation and engagement that help highlight the author's perspective and guide the reader to interpret it in the author's desired way (Hyland, K., & Tse, P. 2004). *Hedges* and *boosters* are "as possible", "maybe", "and maybe" devices that indicate the author's decision to recognize alternative voices and viewpoints and thus hold a full commitment to the proposition (Navratilova, 2016). Hedges emphasizes the subjectivity of a position by allowing information to be presented as opinions rather than facts. Authors must calculate what weight will be given to a statement taking into account the level of precision or reliability they are willing to carry and possibly claim protection if the statement is ultimately overthrown. Therefore, hedges imply that statements are based on the author's reasonable reasoning rather than specific knowledge, indicating the level of confidence that is considered wise to attribute to him (Takimoto, 2015a).

Boosters such as the words "clear", "*clear*", and "*show*" allow allows to close alternatives, avoid conflicting views, and express their certainty in what they say (Bacang,

Bernadita C, Rillo, Richard, M, Alieto, Ericson, 2019) . Buster reinforces authors' claims by expressing the author's certainty in what they say in a single, confident voice or by emphasizing shared knowledge that is generally accessible to the intended reader, which helps the author to close alternative possibilities and build a relationship with the reader through shared topic engagement (Hyland, 2005). By closing out alternative possibilities, reinforcers emphasize certainty and build relationships by marking engagement with the topic and solidarity with the audience, taking a common position against other voices. Its use strengthens the argument by emphasizing the mutual experience necessary to draw the same conclusions as the author. The balance of hedges and boosters in the text thus indicates the extent to which the author is willing to entertain alternatives and plays an important role in conveying a commitment to the text content and respect for the reader (Jalilifar, 2012).

Hedges and boosters are interactional discourse strategies (Hyland, 1996; Radojičić & Novakov, 2022) which means that the function is not always fixed, but changes depending on the context. Therefore, there are many approaches to categorizing hedges and reinforcers. Hedges and boosters as expressions of doubt and certainty (Hidayati, 2020). However, this study adopts Hyland's (1998) taxonomy of hedging devices which has been widely used among these hedging and booster studies (Kim & Lim, 2015; Maláškova, 2015; Vartalla, 2001; Vassileva, 2001). Related to the discourse function, Hyland's approach to hedging categorization can also be applied to the reinforcing function. According to Hyland's taxonomy, hedges and boosters can be separated into two broad categories, (1) content-oriented, which pays attention to how authors evaluate the accuracy and reliability of the truth propositions they make, and (2) reader-oriented, which focuses on how authors interact with readers and vice versa. It is largely found that the balance between content-oriented and reader-oriented hedging and reinforcers is a key indicator of effective persuasion which is especially considered important in research articles where rhetoric is necessary to keep authors accountable for their claims and relationships. With readers in academic disciplines. Hedges and boosters can be realized with many grammatical forms such as modal verbs (would, could, should), and lexical verbs (feel, think, believe). This study will focus on the frequency, grammatical categories, and functions of hedging and reinforcing in the rhetorical structure of editing articles of Indonesian Education students.

Hedges and booster analysis has been carried out by Takimoto (2015a), Navratilova (2016), Bacang, et al. (2019), Hidayati (2020), and Triyoko (2021) who examined the use of hedges and boosters in academic discourse in the fora certificate and EFL writing. Hedges a word or phrase that makes things more vague or less vague (Oktay, 2020). Hedges is not a linguistic concept that has a clear definition, nor is it generally understood by linguists especially those who conduct research related to academic discourse (Crompton, 1997; Radojičić & Novakov, 2022). Hedges and boosters were also studied from the aspect of speech by Holmes (1990). Jalilifar and Maryam (2012) analyze how the use of hedges and booster functions is used in male and female conversations as well as in the political context of presidential debates on Iranian television. Analysis of the use of hedges and boosters can be encoded in the form of modal words, such as research conducted by Risaldi (2021) showing capital verbs have relational value and expressive value as power practices shown by criminals in expressing their power or lack thereof.

Metadiscourse is defined as "linguistic resources used to regulate the discourse or attitude of the author towards the content or its readers" (Farahani, 2019; Peng & Zheng, 2021). In other words, the cohesive and interpersonal functions in the metadiscourse help connect the ideas within the text with content and discourse, allowing the reader to connect, manage, and interpret the text in a way that the author prefers, especially regarding shared understanding and values of a particular discourse. One of the most recent metadiscourse

models put forward by Hyland and Tse (2004) opposes the idea that metadiscourse can be defined as 'discourse about discourse.

The main principles of the metadiscourse approach take writing as a social and communicative engagement between writer and reader. In this regard, metadiscourse focuses on how the author projects himself in a particular discourse to express his point of view and establish a relationship with the reader who is out of the idea of discourse about discourse. Metadiscourse has emerged as an 'interactive' model that embodies a metadiscourse with specific resources to reflect on the discourse and express the attitude of the author towards the text or reader. Therefore, metadiscourse can be viewed as a means of communication because it supports the author to write effectively by connecting the text with the reader and the discourse community.

The two-dimensional metadiscourse developed from the metadiscourse model was proposed by Hyland and Tse (2004). Specifically, these two different aspects of discourse can be referred to as interactive, which refers to "the author's management of the flow of information to guide the reader through the text," and the interactional resource concerned with "the author's explicit intervention to comment on and evaluate the material (Thompson, 2001)." Hyland and Tse (2004) elaborated further on Thompson's framework and introduced subcategories of interactive and interactional resources. The first dimension, interactive resources, deals with how discourse is organized in a text to reflect the author's writing style and to guide readers through the use of transitions.

On the other hand, the second dimension, interactional resources links the author's attitude to their proposition and that of his readers with five elements including hedging (about, almost, seemingly), reinforcers (actually, always, visibly), attitude markers (indeed, I agree, exceptional), self-mentions (me, mine), and engagement markers (assume, in a way, consider). This interactional resource serves as a tool for evaluation and engagement that helps highlight the author's perspective and guide the reader to interpret it in the way the author intended.

Radojičić & Novakov (2022) call hedges and boosters expressions of doubt and certainty. His research on Doubt and certainty in ESL textbooks provides some data on the relative frequency of a wide variety of lexical items that reveal doubt and certainty in the written and oral corpus. However, the importance of the use of hedges and boosters was made clear by Hyland in his research (1998), which found that hedges and boosters were used in academic writing to ultimately embody rhetorical and interactive features specific to the academic genre. It is known that the main function of hedging and encouragement in academic writing is to balance the author's beliefs, reflecting in propositions the appropriate level of confidence to convey certainty or the appropriate level of tentativeness to express uncertainty that invites some social interaction for the author to gain acceptance of their research claims from the reader's academic peers.

Although hedges and boosters have been the subject of much research, especially in academic genres, little has been done on their function, frequency, and distribution in different genres (Sánchez-Jiménez, 2022; Viktorova, 2023). The study adopted Hyland's (2005) list. He further argues that hedging and boosting devices are used to express epistemic attitudes that convey tentativeness, possibility, assurance, and certainty. Hedges and boosters about the author's attitude towards their propositional content fall within the semantic domain of modalities (Takimoto, 2015b). Specifically, epistemic modalities are considered propositional modalities that deal with how a speaker/writer expresses their attitude towards the value-truth of a proposition.

Palmer (2007) categorizes epistemic modalities into three types of judgment: 1) speculation (revealing certainty or uncertainty), 2) deduction (inferring from observable

evidence), and 3) assumption (inferring from what is generally known), most of which overlap with hedging and boosting. Hu & Li (2015) refer to the expression of epistemic modality as "the speaker's assumption, or assessment of probability, and, in many cases, this indicates the speaker's confidence or lack of confidence in the correctness of the proposition expressed.

These epistemic expressions can convey different meanings, depending on the context in which they appear. Statements containing epistemic commentary indicate the degree of certainty of the author in the truth proposition as well as the qualifications of any author, for example how they make the statement with the appropriate degree. What Hu & Li (2015) argue, is that epistemic features of language allow authors to express how much confidence they put in their propositions or how they assess possibilities.

Thus, it can be concluded that hedges and boosters are considered communicative strategies to reduce or increase the power of statements containing value and reinforcers generally reveal the author's level of confidence in the correctness of the proposition. Both convey the author's attitude in including epistemic meanings. In previous research, it can be seen that research on hedges and boosters has been carried out in the context of academic discourse. The difference between this study and previous research lies in the data of students editing articles. Thus, the focus of this study is emphasized on (1) the frequency of hedges and boosters in student editing articles; (2) hedges and booster grammar categories in student editing articles; and (3) the pragmatic form and function of hedges and boosters in student editing articles. This research has a pedagogical contribution to students in higher education. This study used the theoretical framework of metadiscourse, hedges, boosters, and epistemic modalities as lingual features of hedges and boosters.

## **RESEARCH METHODS**

This research method uses a qualitative approach. In qualitative research, the data appears in the form of words, phrases, sentences, paragraphs in hedges, and boosters edited by student scientific articles. In qualitative research, researchers frequency of hedges and boosters in student editing articles, grammar categories of hedges and boosters in student editing articles, and pragmatic form and function of hedges and boosters in student editing articles. The qualitative nature of this research leads to student-edited articles. The qualitative research process in this study involves important efforts such as proposing procedures, collecting data, and analyzing data.

### **Research Design**

This research design uses a descriptive statistical design. Descriptive statistical methods are a set of basic procedures consisting of collecting, organizing, presenting, analyzing, and interpreting data. Descriptive statistics are needed in this study to describe the data that has been collected. Current technological developments allow the analysis of language data using descriptive statistical methods. Research related to the preparation of the language corpus can rely on descriptive statistical methods to read language data that has been processed using language software/applications. Language data in the form of vocabulary can be easily processed using language applications and then adjusted to the needs of researchers. The study also used a corpus reader app, AntConc. The application serves to describe the contents of the corpus in more detail so that the vocabulary in the corpus can be utilized in this study. Student-edited articles are retyped in MS Word format. After finishing typing, the data is saved in text format. This is done so that the data can be read by the AntConc application.

## Research Data Sources

The research data utilized for academic investigation in this study was sourced from a corpus of written documents comprising 21 collections of articles edited by students enrolled in the Indonesian Education Study Program at PGRI Adi Buana University Surabaya during the academic year 2022/2023. This data encompassed various linguistic elements, including punctuation, words, sentences, paragraphs, abstracts, and bibliographic references present within the aforementioned student-edited article compilations. The selection of this specific dataset is instrumental in providing valuable insights into the linguistic and academic characteristics of student-produced scholarly content within the context of Indonesian higher education during the specified academic year.

## Instruments

In the realm of empirical research, the utilization of research data instruments assumes paramount importance. In this context, the chosen research data instrument hinges upon the application of documentation techniques. This particular methodology involves systematic data collection activities aimed at acquiring firsthand information directly from the field of study. Through the meticulous implementation of documentation techniques, researchers are able to compile a comprehensive repository of data, thereby facilitating the empirical examination of phenomena, events, or subjects of interest. This approach not only ensures the credibility and authenticity of the data but also enables researchers to derive meaningful insights and draw substantiated conclusions within the ambit of their study.

## Data Analysis

Data analysis in this study used a pragmatic metadiscourse approach with the help of the AntConc application built by Lawrence Anthony. This app is used to assist in identifying the words hedges and boosters as well as understanding concordance and collocation. The data obtained from the AntConc application described the frequency of hedges and boosters found in academic discourse in editing articles and interpreting hedges and boosters found in the data. The first step, open the AntConc application on the laptop. After that, enter the file that will be used as data. Before inserting files into AntConc (corpus files), make sure the files are saved in .txt form. Select the file menu, then open file(s), select the file that will be used as a corpus and finally select open. If these steps are done well, then the corpus files section will contain data that will be used as a corpus. Researchers can conduct analysis based on corpus files that have been entered. The data that has been entered in AntConc will be shown in Figure 1 below.

Type	Rank	Freq	Range
1	yang	2163	1
2	dan	1662	1
3	kalimat	1290	1
4	dalam	1039	1
5	kata	972	1
6	pada	828	1
7	data	773	1
8	kesalahan	683	1
9	dengan	680	1
10	penulisan	679	1
11	atau	666	1
12	adalah	544	1
13	bahasa	529	1
14	tidak	515	1
15	tanda	514	1
16	dari	478	1
17	ini	395	1
18	penelitian	392	1

Figure 1. Corpus of Emerging Word Frequency Data 1

The AntCconc app is an app that you can use to describe a list of words in a text. The frequency order is based on the highest to lowest levels found in the text. Based on these data can be found 3748 words formed by 54783 word tokens. Of the 3748 types of words classified into hedges and booster words.

## RESEARCH FINDINGS AND DISCUSSION

### Research Findings

The initial phase undertaken in the examination of the utilization of hedges and boosters within student-edited scientific articles, within the context of a pragmatic metadiscourse framework, involved a meticulous word count of the expressions present in the generated corpus of data. Subsequently, the investigation progressed to the analysis of the grammatical categories associated with hedges and boosters, encompassing modal verbs, verbs, and adverbs. This analytical progression aids in identifying the linguistic constructs employed by authors to convey certainty or caution within their discourse. Moreover, it is crucial to note that the analysis procedure remains consistent with the overarching pragmatic metadiscourse framework, ensuring a methodologically rigorous approach to understanding the communicative nuances and rhetorical strategies employed within these scientific articles.

#### *Governance Categoriesasa of Hedges and Boosters*

From this classification, it can be concluded that the dominant words are the words as depicted in diagram 1.

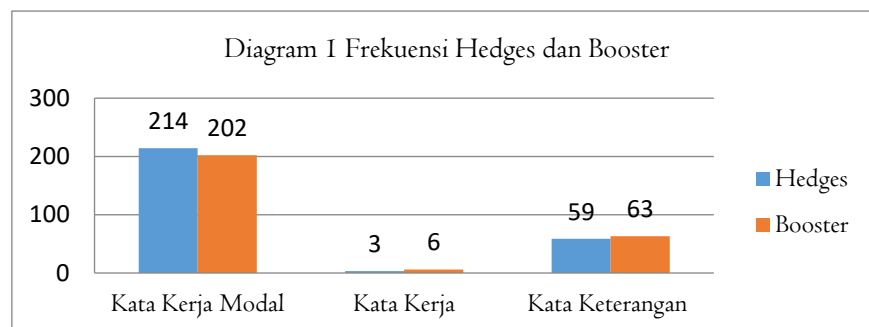


Figure 1. Hedges and Booster Frequency

To answer the first research focus, the information in diagram 1 shows how hedges and boosters in student editing articles can be separated into four grammatical categories including modal verbs, verbs, and adverbs. Based on diagram 1 of the choice of hedges and boosters in the editing article of Indonesian Education students, it is confirmed that most of the claims made by the author of the editing article are dominated by the use of hedges in the form of modal verbs, while the use of boosters is dominated by adjectives and modal verbs. This supports what Sukhanindr found, (Sukhanindr, 2008); Getkham, (2016), modal verbs are one of the three grammatical categories most often used as hedges and reinforcements in the academic writing genre. Modal verbs that qualify or express doubt (hedging) are more often used than those that express certainty (boosting) (Chen, 2012; Hyland & Milton, 1997). In addition, modal verb hedges are used more frequently than modal verb boosters. Meanwhile, adjectives in this form of booster often function as content-oriented (Malášková, 2015). For the third research

focus, epistemic meaning analysis of modal verbs, verbs, adverbs, and adjectives using's (1998) categorization number kers described how pragmatic analysis in the form of functions based on functional pragmatics.

### Pragmatic Forms

It is important to note that modal verbs are analyzed differently because it is found that there are modal verbs that do not express epistemic modalities or can only express another type of modality, namely deontic modalities. Modal verbs are used to express one type of epistemic meaning: probability. The distribution of modal verbs found in student editing articles is shown in Table 2 below.

Table 1  
Modal Verbs Expressing Epistemic Modalities

Capital	Education Student Editing Articles Indonesian
Hedges	
	Frequency
Maybe	9
Should	8
Can	37
Will	160
Booster	
	Frequency
Must	202

Table 1 is important to note that the hedges and boosters of modal verbs listed express epistemic modalities. It is clear from the table that the number of modal hedges verbs is more than the number of modal booster verbs. For modal verb hedges, perhaps (9), preferably (8), (37), and will (160) have the highest frequency, while the number of boosters should be (202) most frequently used in student editing articles.

The epistemic modality meaning of the word *may be* found in the corpus of student editing articles. The word *may* signify and express the author's lack of confidence in (Hyland, 1998b), as in quotes (1) through (3) below.

1. *Re-read carefully there may be mismatched sentences or paragraphs*
2. *Without punctuation, it can make it difficult for the reader to understand the writing, maybe the sentence or paragraph is too long, making the reader breathless.*
3. *The writer must describe the object as concretely as possible so that the reader seems to see, hear, and feel.*

Modal verbs *may be* in data citations (1), (2), and (3) expressing less likely to be tentative in the academic discourse of editing articles than in personal writing. Modal verbs may in the data corpus only be used a fraction of times. This is in line with what Hyland and Milton (1997) convey which reveals that non-native English writers/speakers use *may* as a marker of the chosen possibility in writing a scientific article. Modal verbs might express epistemic meanings by indicating the degree of probability (Biber et al., 1999).

In the context of analyzing student-edited articles, it is imperative to ensure that modalities are endowed with the semantic significance derived from the corpus of these articles. It is worth emphasizing that the modulation of meaning within these articles is intricately linked to the speaker's level of confidence. This is particularly significant as modality is predominantly employed to convey obligations and necessities, serving as a means by which authors articulate their judgments regarding the correctness or appropriateness of certain assertions (Coates, 1983). Consequently, an examination of



modalities in student-edited articles not only contributes to a nuanced understanding of the linguistic choices made by the authors but also sheds light on their subjective assessments and evaluative perspectives, thus enriching our comprehension of the discourse within these scholarly works. Consider the following quote:

4. *Comma edits after the language code should be omitted as they have nothing to do.*
5. *Spacing period punctuation should require a final check before the final collection.*

The use of the word should be in data (4) and (5) as a form of probability assessment based on the author's subjective interpretation of facts that are less certain than expected (Coates, 1983). Therefore, it is based on the probability of events based on logical reasoning that must pay attention to the author's inference or prediction (Celce-Murcia and Larsen-Freeman, 1999: 85). Thus, the use of modal verbs should be used to assess scientific articles that are considered incorrect and need improvement.

Modal verbs can be found in the corpus of student editing articles. According to Coates (1983), there are two main uses of can. First, it contains a deontic meaning, which in the past tense of deontic possibility can be used to signify an outcome as a result of possible external conditions referring to the author's assessment of the existence of a proposition. This is in line with the opinions of Coates (1983), and Palmer (1990) who stated that meaning can signify an ability or will, such as data (6) and (7) below.

6. *Uncohesive sentences can occur due to the insertion of words between transitive active verbs*
7. *Errors in quoting can be fatal with accusations of plagiarism occur*

The word can in data (6) and (7) is used as a form of judging based on personal assumptions related to ability. The word can in the context of the sentence above has the meaning of the author's opinion (Palmer, 1990: 36). The next modal verb that has the highest and first frequency in the corpus of edited articles of UNIPA Surabaya Indonesian Education students will be used to express the meaning of hypothesis prediction and has an epistemic function (Coates, 1983). This can be seen in the following data.

8. *Writing titles should not use all capital letters but the use of capital half at the beginning only*
9. *The sentence would be logical if changed to as below*

The use of modal verbs will be on data (8) and (9) containing hypothetical meanings that can evoke ideas or images in the mind. It is in line with Leech (Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, 1999) that meaning will have a more suggestive understanding and greater distrust than the author. Thus, epistemic will is used in personal writing to express the authenticity of the author to the expression that is trying to show. In the above context, the function would be as softening the claim but implying an absence of competency to the proposition versus the use of boosters, as the following data suggest.

1. *Writing scientific papers must use effective sentences so that the information conveyed by the author*
2. *The reading material or library reference used must be accountable. Therefore, the meaning of this quote*

Epistemic modalities in verbs found in academic discourse of Education student editing articles Indonesian distributed with various types of verbs, namely cognitive verbs.

Table 2  
Verb Found in Academic Discourse

Capital	Education Student Editing Articles Indonesian
Hedges	Frequency
Feel	3
Booster	Frequency
Think	6

The 2 verbs *feel* are the only hedges being the only ones found in academic discourse student editing articles with 3 frequencies. For boosters in the form of capital *thinking* as much as 5 frequencies. The verbs *feel* and *think* are a distribution of cognition verbs related to the mental processes of the author. Varicella (2001, p.122) explains that cognitive verbs are used to introduce author propositions that are based on subjectivity rather than empirical evidence. In addition, it was found that cognition verbs such as *feel* and *think* are often used in academic discourse article editing. Consider the following data.

1. *The reader easily knows or follows the writer's train of thought without feeling that there is some sort of separating a sentence*
2. *Qualitative research emphasizes process analysis, from the thought process inductively*

In data (12) it is clear that the use of the word *feel* is clearly shown as a form of cause and effect felt by the reader if the author can explain his thoughts. The same is shown by the word *thinking*, as in data (13) as a form of series of actions, making, or managing through the mind to decide what to do. The use of the verbs *hedges* and *booster* in editing articles is not followed by the presence of a personal subject either explicitly or implicitly in assessing their proposition. In particular, subjectivity allows the reader to assume that only the author knows the source of knowledge or evidence and can draw conclusions from it.

In articles edited by students, adverbs were found as *hedges* and *boosters*. Despite the different concepts, *hedges*, and *booster* adverbs both contain epistemic meanings when they express the author's attitude towards propositions.

Table 3  
Adverb Found as Hedges and Boosters

Capital	Education Student Editing Articles Indonesian
Hedges	Frequency
Possibilities	3
Often	24
Sometimes	2
Usually	22
Enough	5
Rather	2
Majority	1
Booster	Frequency
Certainly	7
Actually	2
Really	3
Clear	44
Always	7

Table 3 uses hedges and boosters in the form of epistemic modalities adverbs with the highest frequency first in the form of frequent capital (24), followed by capital usually (22), sufficient (5), likely (3), sometimes, and somewhat equally (2) and mostly (1). For boosters, the highest frequency is capital clear (44), definite and always (7), indeed (3) and actual (2). Analysis of epistemic modalities in adverbs analyzed based on the semantic features of hedging adverbs and reinforcers as described by Varttala (2001) suggests that analysis of hedging adverbs in particular raises more questions about their meaning than their syntactic functions. Consider the following data.

14. *On the data obtained produce words such as deviant, sometimes provocative, can also, the most, groan, relevant, such meaning.*

In data (14) the use of capital is sometimes an adverb of forecasts used by authors based on personal arguments. In the context of the sentence above, capital is sometimes followed by the word "provocative" as an affirmation that what is felt and judged in scientific articles can cause anger if the data used by the author is incorrect. The use of capital sometimes refers to the adverb of approximation mostly in the form of hedges because it is used for the tentative approximala (Varttala, 2001). It is based on the authors modifying the accuracy of the data to be less precise (Hyland, 1998). This is different in the use of modal hedges of other adverbs, such as possibility as an adverb form of doubt, as well as modal often, usually, sufficiently, somewhat, and most adverb forms with unlimited frequency. This is in line with Varttala's (2001) statement, that herbs with unlimited frequency are commonly found in hedges, as they allow authors to make categorical statements safely without full commitment, or approximation with less precision. The following adverbs are a form of certainty characterized by the use of clear capital, such as the following data.

15. *The error in paragraph development lies in the repetition of sentences and distorted sentences, as well as the details of a sentence that should be able to be used as a paragraph that is complete and located with the main idea. These paragraph writing errors can be corrected by editing it so that it becomes good writing and easy for readers to understand*

Capital is clear on data (15) as a form of adverb certainty from what the author conveys. Capital is a form of epistemic expression and is used to convey a degree of certainty. Malášková (2015) explains that adverbs of certainty or doubt are types of adverbs that clearly express epistemic modalities and are used to convey the author's degree of certainty or doubt towards his proposition.

## Discussion

From the expression of epistemic modalities, the study found differences in the frequency and form of hedges and boosters that the authors used in editing scientific articles. First, the expressions of epistemic modalities that often appear and are used are hedges. Hedges realized in such epistemic modalities are used to express the uncertainty and inaccuracy of an author's statement that allows to open up the possibility of different views of the reader's opinion. In addition, hedges are also context-oriented, as well as writer- and reader-oriented which reflects the use of hedges in student-edited scientific articles.

The predominance of the emergence of epistemic modalities hedges and boosters in the form of modal verbs. Getkham (Getkham, 2016) on authorship attitudes in scientific work found that while hedges are most often realized with modal verbs. The use of hedges in particular can be used as a tool to make things more blurred (Sumanat, 2017). Getkham (2016) considers hedges as a tool to make things vague and also for intercultural

communication according to discourses from different cultural backgrounds. In addition, the modal verb booster also means appropriate, mandatory, must (must not be). If hedges in the context of a sentence are followed by an affirmative word, then the sentence has a meaning that it should be not. GraBrielatos and McEnery (2005) state that the word 'must' relating to time or future forecasts, does not fall into any category of epistemic modalities. To be expressed as an epistemic modality, the word affirmation is supplemented by a word, phrase, or clause that follows or precedes in order for it to be performed.

In scientific articles, the utilization of verbs appears to be sparingly employed by student editors, as evidenced by their infrequent usage, which often relegates them to the less prominent positions within the text. This observation underscores a noteworthy aspect of the discourse structure, where verbs are not accorded primary importance in student-edited articles. Within the realm of hedges and booster verbs, an interesting pattern emerges. Hedges are predominantly instantiated by the word "feel," serving as linguistic devices that express caution or uncertainty. Conversely, booster verbs, which amplify the strength of assertions, are primarily represented by the word "think." It is pertinent to note that these cognitive verbs, such as "think," are intrinsically linked to the mental processes of the author, as elucidated by Vartalla (2001). This association between hedges and boosters and the author's cognitive engagement underscores the complexity of the linguistic choices made within these scientific articles. Moreover, it is essential to delineate that hedges, within the context of the article, do not necessarily connote modesty in the manner they might in oral discourse. In the written domain, hedges function differently and do not necessarily imply a lack of confidence but, rather, serve as tools to modulate the author's assertions. In contrast, the interpretation of modesty in oral discourse relies on various sociolinguistic cues, including word choice and politeness markers in spoken language, which distinctly differ from their written counterparts. Hence, this distinction between written and oral discourse underscores the multifaceted nature of linguistic expression within academic contexts.

In the realm of linguistic analysis within academic discourse, it is crucial to differentiate between hedges and boosters, as they serve distinct functions. Unlike hedges, boosters do not fall within the category of politeness devices. This distinction arises from the multifaceted pragmatic functions that boosters encompass, which extend beyond politeness considerations. According to Holmes (1995), boosters are employed in scientific articles to convey a range of nuanced meanings, including expressions of solidarity, evidentiary claims, and implicit or accepted truths. The interpretation of these meanings is contingent upon the context in which they are used, highlighting the intricacies of linguistic expression within this genre of discourse. More specifically, Skelton (1997) posits that boosters assume a pivotal role in justifying the veracity of evidence or implicit truths within an author's claims. This function is crucial for reinforcing the credibility of propositions put forth in scientific articles. Hunston's studies (1993; 1995) further substantiate this assertion, demonstrating that verbs denoting reinforcement, which are characteristic of booster usage, serve to indicate a high degree of certainty grounded in empirical data. Importantly, this certainty is rooted in the empirical findings themselves, rather than being contingent upon the persuasive prowess of the author. Thus, the deployment of boosters in scientific discourse is intricately tied to the evidential basis of claims, adding a layer of credibility and substantiation to the assertions made within academic articles.

Within the domain of linguistic analysis, it is noteworthy that epistemic modality, as encapsulated in the usage of adverbs, exhibits a dual frequency pattern, encompassing both hedges and boosters. These adverbs play a pivotal role in conveying a sense of probability or certainty, thereby contributing to the nuanced discursive landscape within academic writing. The choice of employing hedges or boosters, however, is not arbitrary; it is

profoundly influenced by established conventions and distinct rhetorical styles that typify different discourse communities. This strategic selection of hedges and boosters, as elucidated by Fraser (2010), serves as a linguistic device indicative of an author's level of commitment to their assertions at the semantic and rhetorical levels. Consequently, the pervasive use of hedges and boosters represents a rhetorical strategy adopted by authors to navigate the delicate balance between asserting certainty and acknowledging the potential for ambiguity or tentativeness within their discourse. This linguistic phenomenon extends beyond mere textual ornamentation; it serves as an essential aspect of language that underpins effective social interaction. It allows authors to deftly communicate the degree of certainty or doubt inherent in their claims while employing rhetorical strategies that are contextually appropriate. Thus, hedges and boosters constitute an integral facet of linguistic expression in academic writing, embodying an author's ability to navigate the intricacies of scholarly discourse and tailor their language use to meet the communicative demands of a given context.

## CONCLUSION

From the explanation above, three conclusions are proposed. First, college students tend to use epistemic modalities in modal verbs. The results of this analysis of modal verbs can provide answers about expressing epistemic meanings, except that it can and should not be able to express epistemic meanings in affirmative sentences, and exceptions to some forms can and should be found to express epistemic modalities in affirmative sentences depending on the context of the claimant. Second, many students tend not to use verbs and more to use capital verbs that mean certainty and possibility. In the metadiscourse view, modal verbs can be used as hedges and boosters because they qualify the author's statement or weaken the strength of a statement. Third, many authors tend to use adverbs to mean epistemic modalities. In the metadiscourse view, adverbs contain hedges and boosters that are based on the meaning of semantic features rather than their syntactic functions.

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