LingPoet: Journal of Linguistics and Literary Research

Using AntConc Software in Analyzing Modality: Case Study in EFL Tertiary Students' Hortatory Exposition Text in Indonesia

Nafilah Cahyati[1], T. Silvana Sinar[2], Muhammad Yusuf[3]*

[1,2,3]*Faculty of Cultural Sciences, Universitas Sumatera Utara, Medan, Indonesia*

Abstract. This study aimed to analyze the modality and how its realization in argumentative genre texts – hortatory exposition collected from the students of English Department of USU batch 2018 class B to depict the students writing ability from the perspective of modality. The subjects of this study are the students who already taken four semester of college as writing subject is taught for four semesters. Moreover, the argumentative genre is taught in the semester four based on syllabus. This study used the framework of writing genre-based (Martin, 1984)and Systemic Functional Grammar (Halliday&Matthiessen, 2014). The methodology of the analysis is corpus-based employing software AntConc 3.4.5 by Laurence Anthony in order to generate accurate data of lexical items contain in the texts. The findings showed that modalization type of modality indicating probability is dominantly used by the students as much as 60,08%, otherwise usuality is measly used as it is found only 4.44%. The study also revealed almost three-quarters percent of the modality found are realized as modal operators as it is found 70.68% from the analysis.

Keyword: *Corpus-based Analysis, Writing Genre-based, Hortatory Exposition, Modality, Systemic Functional Grammar.*

1. Introduction

Writing skill has been very essentials in many fields, especially in educational field. The importance of writing can be seen as the skills being one of judgments to judge scholar's competence and intellectual in tertiary level, such as in university. Writing is viewed as a product of teaching and learning which made through a number of phases to follow in (Martin, 1992). As writing (Hyland, 2004)has purposes, context, and intended audience, it is defined as a form of communication which can be form as writing task and writing syllabus.

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[*] Corresponding author at: English department, Universitas Sumatera Utara, Medan, Indonesia

E-mail address: nafilah.cahyati@gmail.com

Introduction parts of students' theses have a high LD score (Zein, Sinar, Nurlela, & Yusuf, 2020). The fact the high proportion of LD indicates that students' ability in writing introduction part is academically acceptable in accordance with the rules of written language even though it is still classified as complex (Hanafiah & Yusuf, 2016). To a great extent this is because it contains a large number of lexical items in each clause.

Genre-based is one of the approaches that proposed by Martin (1985) and popularly used by teachers in teaching writing as its pedagogies concept of teaching is beneficial to look beyond content, composing process, and textual forms to see writing as an attempt to communication with readers (Hyland, 2004). Genre is a term for grouping texts together which helps to organize the common-sense labels we use to recognize texts as the situations in which they occur (Hyland, 2004). When texts share the same general purposes in the culture, they will often share the same obligatory and optional structural elements and so they belong to the same genre or text type (Butt, Fahey, Spinks, & Feez, 2003). It is very obvious that producing writing based on genres will be so much easier as we know the type, function, and structure. For this reason genre-based writing is now part of the curriculum in some schools (Butt et al., 2003). In Indonesia, this pedagogical concept commonly use in writing teaching and learning process in any schools and universities including University of Sumatera Utara.

There are five kinds of genres, i.e. descriptive, explanative, instructive, argumentative, and narrative which each genre has its own products (text)(Knapp & Watkins, 2005). Exposition text is an argumentative text which used to effectively deliver writer's arguments to the readers. The structural elements of the text are statement of position, preview of arguments, arguments supported by evidence and reinforcement of statement of position (Butt et al., 2003) .The grammatical features of argumentative text are mental verbs, connectives, movement from personal to impersonal voice, modality, and nominalization (Knapp & Watkins, 2005). In line with the structure of the texts explained by Butt et al. hortatory exposition is argumentative writing which consists of arguments. Thus, modality is one of grammatical features of arguing which is used to position the writer and reader (Knapp & Watkins, 2005).

Modality (M. A. K. Halliday&Matthiessen, 2014) is an intermediate degrees, between positive and negative. They state that modality is as the speaker's judgment, or request of the judgment of the listener, or the status of what is being said. Based on the theory of systemic functional grammar, modality is split into two indicative types which are modalization and modulation. Modalization is split into probability and usuality. On the other hand, modulation is split into obligation and inclination. Obligation indicates the utterance is during a kind of command from the speaker to the hearer, and attaches the degree of obligation from the speaker. Whereas, inclination indicates the utterance is in a form of offer from the speaker to the hearer, and attaches the degree of inclination from the speaker. In delivering opinion, modality plays important role in convincing writer's idea to the readers. The flexibility to use modality

appropriately also contributes significantly to pragmatic aspect in English writing (Hyland, 2004; Meyer, 2002; Yang, 2018) and will reflect a complicated level of both linguistic and pragmatic proficiency in the written mode (Yang, 2018).

As the concept of modality is to specific speaker's or writer's attitude or thought towards certain topic, modality often employed in the argumentation which is a part of the hortatory exposition text. Example of the use of modality in argumentation in exposition text:

This research concerns about modality and intended to check the modalities in USU's department of English student's hortatory exposition texts. The reason to discuss about this is to seek out modality types employed by the students' in their writing to measure the writing ability of the students through modality usage. As an English major, the scholars of this department are expected to be ready to deliver their opinions through writing or speech. In giving arguments, modality use in writing or speech plays important roles in convincing others – especially in this case, hortatory exposition text. Therefore, this research is important to seek out the categories of modality use dominantly by the scholars in their writings.

Since hortatory exposition text contains arguments, writing cannot be considered as a hortatory exposition if there is no modality contained within the text. As the aimed of this research is to analyze USU's department of English student's hortatory exposition text, this research is important to be conducted to find out the extent of student's ability in writing arguments through hortatory exposition text as an input to department of English of USU. The data is collected from the writing assignment department of English students in who are in the fourth semester of college. This research will be conducted by employing corpus-readable software AntConc 3.4.5 by Laurence Anthony in order to get accurate result of the modality used in the writings.

There are some relevant studies concerning modality in students' hortatory exposition text.(Ardiansah, 2015) has conducted a research about modality in students' hortatory exposition to find out types and interpersonal meaning of modality contain in the text using the Halliday's theory of Systemic Functional Grammar (SFG). (Yang, 2018) also has conducted a research on modality in Chinese learners' academic writing using software AntConc. Yang's research provides insight into the use of modal verbs in the English classroom which contributes to the academic writing curricula design. A similar research on modality has conducted by Surjowati (2016) which concerns on argumentative writings. Her study showed that the students tend to continually use similar expressions of modality in their writing because they do not precisely know the use and meaning of modality expression (Ganie, Sinar, Deliana, & Yusuf, 2020) also analyzed selected data by using procedures proposed in the AntConc corpus tools.Even though similar researches have been done before, this research is still worth to be conducted as it has different object from the previous studies and as a depiction of the ability of

USU's department of English students' in using the modality. This is a corpus-based analysis so that the figures resulted accurately.

In order to depict students' writing ability, lexical density analysis is also included to measure dense level of the writings from the lexical items contained in the texts. Definition and framework of lexical density by Ure (1971) is employed in this analysis. Based on the above explanation, analyzing modality in USU's English Department student's hortatory exposition text is necessary to be conducted to find out the types of modality found in student's writing. The result of this research will also be an important input to the department as a depiction in measuring student's ability in writing and defining best teaching strategy for the students.

2. Theoretical Framework

2.1 Genre-Based Writing

Genre defined as a text grouping system based on how writers typically produce writing based on its purpose (Hyland, 2004). Genre-based concept of writing came from the idea that readers tend to easily recognize similarities in the texts which repeatedly use.Genre-based is an approach in writing proposed by Martin (1985) and popularly used as pedagogical concept of teaching writing since it is beneficial to differentiate content through the textual form and the composing process in order to communicate with readers(Hyland, 2004).

Based on the type, text is divided into register and genre. Register see writing based on the common similarity of meaning in texts, while genre differentiate text based on the obligatory structure elements of texts (Butt et al., 2003). Martin 1992 (Dirgeyasa, 2014)explained that writing is a product of teaching and learning made through some phases i.e. modeling, deconstruction, and language understanding. (Dirgeyasa, 2014)states that genre-based approach in teaching and learning is a combination of the text, writing process, and experiences.

Knapp & Watkins (2005) considered that genres of text is based on the social process i.e. describing, explaining, instructing, arguing, and narrating which then forming a lot kinds of text genre such as exposition text exist as the arguing social process of human.Exposition text is a genre of arguing which involves the process of reasoning, evaluating, and persuading (Knapp & Watkins, 2005). Exposition text is a kind of text which demands writer to focus on argumentation purposes including the process of how students put forward a viewpoint, providing supporting evidence, and persuading the readers (Knapp & Watkins, 2005). The structure of hortatory exposition texts are statement of position (thesis), arguments, and recommendation.

2.2 Systemic Functional Grammar

Systemic functional grammar (SFG) focuses on studying language function in social settings. It is a way to realize meaning of a used language through understanding lexical and grammatical

choices used in sentence or utterance (Butt et al., 2003). Modality refers to the area of meaning that lies between yes and no – the intermediate ground between positive and negative polarity (Halliday&Matthiessen, 2014). It is an intermediate degrees, between positive and negative, such as 'sometimes' and 'maybe'. They explained that modality as the intermediate degree divided into two types i.e. propositions and proposals.

In proposition, the meaning of the positive and negative pole is asserting and denying; 'it is so', negative 'it isn't so'. While, in a proposal, the meaning of positive and negative poles is prescribing and proscribing: positive 'do it', and negative 'don't do it' which actually showing regulation and prohibition. Moreover, modality also has rhetorical function (Knapp & Watkins, 2005) to represent persuading readers to accept the truth being said by using adjectives and nouns.

Modality is divided into modalization and modulation (Halliday&Matthiessen, 2014). Modalization identify probability and usuality which express statements to assert or deny something by using modal words e.g. *can, may, etc*, whereas modulation indicates command and offer which identify as obligation and inclination by using modal words e.g. *should, want, will, etc.* Both types of modality has three degree of value that which shows how convincing a sentence is.

2.3 Lexical Items

Items are divided into lexical and grammatical (Halliday, 1989).Lexical items are called open class word because of the possibility to include new members of the class (Johansson, 2008) whereas, grammatical items enters into a close system (Halliday, 1989) because new prepositions or pronouns seldom enter the language (Johansson, 2008).

Lexical items, also known as content words, are technically items rather than words in the usual sense, because they may consist of more than one word: for example*, stand up, take over, call off*, and other phrasal verbs all function as single lexical items (Halliday, 1989). Ure (1971) has different view on seeing lexical items (Johansson, 2008). Halliday counts word; for example, *stand up,* as one lexical item, while Ure (1971) counts it as one lexical item (*stand*) and one grammatical item (*up*) (Ure, 1971). In definition of lexical items by Ure (1971) is employed in this analysis as it is corresponding with methodology used. Lexical items consist of nouns, verbs, adjectives, and adverbs. This analysis only focus to lexical items so grammatical items is not counted.

3. Method

The research design is descriptive qualitative by using corpus-based analysis. Qualitative method as a research methodology of social sciences by collecting and analyzing data is not concern about the numbers or statistics. In doing the research, documents analysis will be

applied. This study applied content analysis method in analyzing the data in written form (documents).

In this research, the documents that will be used are a corpus of hortatory exposition text of USU's department of English students. Genre such as content analysis, conversation analysis, and discourse analysis pay meticulous attention to the nuances and embedded meanings of literally every single word in a data corpus as part of their analytical processes (Miles, Huberman, & Saldana, 2014)

As the data submitted into a corpus, this research can be classified as a corpus-based analysis. Corpus linguistics is more a way of doing linguistics (Meyer, 2002)and a methodological basis for pursuing linguistic research (Meyer, 2002). Further evidence that corpus linguistics is a methodology can be found by surveying the various types of corpora available and type of linguistic analyses conducted on them (Meyer, 2002). For example psychology analysis based on the CHILDES Corpus done by MacWhinney (2000), the study of the evolution of English done by Rissanen (1992) based on the Helsinki Corpus which contains various types of written texts from earlier periods of English, etc. In order to gain an accurate findings, this research will employ computer corpus softwareAntConc 3.4.5. by Laurence Anthony to analyze the data.

a. Data and Data Source

Data used in this study are lexical items that are collected from 17 students' hortatory exposition texts that are calculating by the system of AntConc. The data are original writings of USU's department of English students' hortatory exposition text who minimum are students of class B English Literature 2018. The researcher chose to collect the data from students who already in the fourth semester are because writing subject in USU's department of English being taught for four semesters. The fourth semester students are those who have been studied writing to the top level of the curricula offered so they have understanding of writing text based on genre including hortatory exposition. The writer's decision in selecting the subject is actually based on the syllabus of writing class which based on preliminary observation by interviewing the lecturer teaching writing last semester.

b. Data and Data Source

All the USU's departments of English student's hortatory exposition text are collected from fourth semester students in English department. The data is collected from the assignment of writing class B 2018 students in USU's department of English. All the data collected from the students in written form. The data documents then type in .txt file extension and submitted into corpus which further will be uploaded to corpus tools AntConc 3.4.5. in order to collect accurate data of modality contain in the texts to further analyzing.

The steps of collecting data from corpus tools until analyzing the data are described as follows:

1. All the .txt file extension of USU's department of English students' hortatory exposition text is submitted into a database named USU English Corpus.
2. After that, corpus will be uploaded into AntConc 3.4.5 software by Laurence Anthony. The software isautomatically sorted word lists exist in the corpus as well as its frequency.
3. Noting down the word list, sorted the modality words as well as lexical items from the word list.
4. Calculating the result of the analysis using the formula (1); P (percentage), *f(x)* (frequency of modalization and modulation),N (Total of modalization or modulation).

$$P = \frac{f(x)}{n} \text{ x } 100\%$$
(1)

5. Measuring lexical items in the texts using formula 2 (Ure, 1971)

$$P = \frac{Word\ Types}{Word\ Token} \text{ x } 100\%$$
(2)

4. Result

The analysis of the study is done by focusing in finding the answer of the research question: What are types of modality found in USU's department students' hortatory exposition text? And, how those modalities are realized in the texts? The method of the study is employed AntConc 3.4.5 computational corpus tool in order to generate an accurate data analysis. The percentage of the finding is displayed in table 1.

Table 1 Percentage of modality found

	Modality							
	Modalization				**Modulation**			
	Probability		Usuality		Obligation		Inclination	
High	35	14.11%	2	0.81%	17	6.85%	0	0
Median	15	6.05%	6	2.42%	11	4.43%	52	20,97%
Low	99	39.92%	3	1.21%	2	0.81%	0	0
Total	149	60.08%	11	4.44%	30	12.09%	52	20,97%

Firstly, from the result of the analysis, it is found four types and three degree of values of modalities in USU's English Department Students' Hortatory Exposition Texts. The table of percentage shows that the students commonly use low degree of probability (39.92%) and median degree of inclination (20.97%). The modalization words commonly used by the students are *can* and *be able to.* In the other hand, the students only use *will* and *want* in showing inclination.

From 17 collected Hortatory Exposition texts, there are found 249 clauses contain modality. The students highly use modalization indicating low-degree of probability (39.92%) and modulation indicating median-degree of inclination as use found 21.97% from the whole obtained data. While, modalization indicates usuality is rarely use by the students as the result show it is only

4.44% usuality found in the whole obtained data. In modulation type indicates obligation, the students tend to use the high-degree of obligation by using the word *must* and *required to* for about 6.85%. Otherwise low-degree of obligation is rarely use by the students as it is found only 0.81% from the whole obtained data.

The result shows that the students tend to use the word *'can'* and *'be able to'* in showing probability, *often* and *sometimes* in showing usuality, *must* and *should* in showing obligation, *will* and *want* in showing inclination. The finding (see table 2) shows that the students are less varied in choosing diction in the writing as they repeatedly use the word *can, be able to,* and *will* in their writing.

Table 2 Percentage of modality found

Type		Word	Typical Realization				Frequency	
			Modal operator	Modal adjunct	Passive verb predicator	Adjective predicator		
M O D A L I Z A T I O N	**Probability**	Can	78				78	
		Be able to	14				14	
		Most		9			9	
		Think		8			8	
		Would	6				6	
		May	6				6	
		according		4			4	
		Really		3			3	
		suggest		3			3	
		based on		1			1	
		Clearly		2			2	
		Doubt		2			2	
		accurately		1			1	
		Agree		2			2	
		approximately		1			1	
		Believe		1			1	
		commonly		1			1	
		Could	1				1	
		Might	1				1	
		probable				1	1	
		Surely		1			1	
		Being unable		1			1	
		probably		1			1	**148**
	Usuality	Often		3			3	
		sometimes		3			3	
		Usually		2			2	
		Always		1			1	
		continuously		1			1	

MODULATION								
		frequently		1			1	**11**
M O D U L A T I O N	Obligation	have to	4				4	
		must	11				11	
		should	11				11	
		allow		2			2	
		better		7			7	
		require			1		1	
		required			1		1	**37**
	Inclination	Will	44				44	
		want		8			9	**53**
TOTAL			**176**	**69**	**2**	**1**	**248**	

Secondly, in order to answer the problem of how the modality used are realized in the texts. The findings indicate that the students generally use finite modal operators in their writing as there are 176 modal operators found in the whole corpus followed by modal adjunct with the number of 70. Otherwise, passive verb and adjective predicator is rarely use by the students as it is found only 2 passive verb predicator and 1 adjective predicator.

Thirdly, the corpus-based analysis is also provide the result of lexical items complexity which measure by calculation the word type and tokens found in the texts. The lexical measurement display the average of lexical density of the texts is 56,89%.

The result is relevant to (Zein, Sinar, & Yusuf, 2020)study that find out the goal of the thesis in academic writing is to provide beneficial information for readers. She further acknowledges that there are some reasons to support this condition to occur namely writing experience, language proficiency, or it is done on purpose to show their writing style. This study contributing giving a depiction of the writing ability of USU's English Department Students class B 2018 by analyzing the modality and measuring the lexical items in the students writing.

5. Conclusion

The finding shows that the students tend to use low degree of probability in the hortatory exposition text. As it is a kind of argumentative genre, the overuse of low degree of probability indicates that the text is less convincing. In contrary, the result shows that the obligation types of modality majorly used in high degree of value which indicates that a strong recommendation. The less persuading arguments used in the texts are not enough to support the strong recommendation offered by the writer regarding the issue. According to the findings, in writing a convincing hortatory exposition text, the students should be more aware of the use of modality. Avoiding the overuse of low degree probability is essential to make a persuading arguments and recommendations. Therefore, it is important for teachers to give insights on how modality affect the persuasiveness of a texts in the very first place since the subject of this research are ESL learners.

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