Taxis and Logico-Semantic Relation in Undergraduate Students' English Theses Writing Text :
A Systemic Functional Linguistics Approach

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ABSTRACT

This paper aims to describe the use of taxis and logico-semantic relation in undergraduate students' English theses writing text. This analysis was based on systemic functional linguistic theory focusing on textual metafunction of meaning which is on the level of lexicogrammar. Data informing this study were taken from 10 English theses writing texts written by undergraduate students of Artha Wacana Christian University. Based on the descriptive qualitative analysis it was found out that in taxis relation, hypotaxis was used higher (172) than parataxis (89). This fact indicates that students tend to explain their interpretation using unequal status in order to explain idea clearly. The parataxis consisted of either coordinate or paired conjunction, whereas hypotaxis consisted of subordinate conjunctions. The use of logico-semantic covered expansion (elaboration, extension, and enhancement) was more than projection (locution and idea). The idea used was verbal process. The use of locution of projection was realized by the use of mental process, such as, thought, hypothesize. The use of taxis and logico-semantic in theses writing realized textual meaning of text that is important for a text cohesion. It is suggested that grammar and academic writing lecturers should give more exercises or train students using varieties of taxis and logico-semantic relation to empower students' writing knowledge.

Keywords: logico-semantic relation; taxis; texts; systemic functional linguistics.

INTRODUCTION:

Language is used in context in which people be interact to each other. Speakers in a discourse can interact among others if they understand the text, context or pattern of a language. Therefore, text analysis means analyzing the language use in it (Brown & Yule, 1983, p. 1). It is also stated by (Halliday M. , 1985, p. 10) that "a linguist who describes language without considering text is barren and describing text without correlating to language is empty." Based on these views, it is important and interesting to analyze text since text covers language and the use of that language is influenced by either social context or cultural context or ideology of a society that use a language.

Text can be in spoken and/or written form (Halliday, 1975), (Halliday M. , 1985), (Halliday & Hassan, 1989), (Halliday M. , 1994), (Halliday & Matthiensen, 2004) (Halliday & Matthiensen, 2014), (Fairclough, 1995). Text can also be a prose, poem or lyric, dialogue or monologue (Halliday M. , 1975, p. 1); (Halliday & Hassan, 1989, p. 11).Text can be considered as product and as process (Halliday & Hassan, 1989, p. 10), He stated that "text is a product in the sense that it is an output, something that can be recorded and studied,…. It is a process in the sense of a continuous process of semantic choice,…." Moreover, (Halliday & Matthiensen, 2004), (Halliday & Matthiensen, 2014, p. 3) stated that "text itself may be lasting or ephemeral, momentous or trivial, memorable or soon forgotten." Based on this view, it can be said that text can be a long or short text. Text has power to create its own context but it has power because of the way of system has developed by making

meaning out of the context as it was given (Halliday & Matthiensen, 2004, p. 29). Thus, one of the important things to be analyzed is language used in written text.

Systemic functional linguistic theory is a theory which focuses on language function in use (context). This theory concerns language as a main one (Halliday M. , 1985, p. 17). In other words, systemic functional linguistic theory describes how language is functioning in context. This theory early known as Systemic Functional Grammar (SFG). It is a model of grammatical description developed by Michael Halliday It is also as a part of social semiotic approach to language called systemic functional linguistics.

This theory proposed four basic categories, namely, unit, structure, class, and system. On the level of lexicogrammar, there are three metafunction of meaning, namely ideational, interpersonal and textual meaning in which clauses are used as representation, exchanging and message. Those three metafunction of meaning are realized in mood structure, transitivity, and theme-rheme.

Concerning to what has been described previously that systemic functional linguistics considered language as a potential system in human interaction that is realized by varieties of structures, semantic is one important thing to be considered. Level of language semantic according to (Halliday, 1978, pp. 128-133); (Halliday & Matthiensen, 2014, pp. 30-31) covers three metafunctions of meaning, namely ideational metafunction that is realized in transitivity, interpersonal metafunction that is realized in mood system/structure and textual metafunction that is realized in theme- rheme. Moreover, transitivity is realized in the use of process, participants and circumstances. Mood system is realized in declarative (affirmative and imperative) and interrogative. Mood element is realized in subject and finite. Other element of mood structure that is realized in structure of the residue.

Textual meaning as discussed in this article is realized on the lexicogrammar in which thematic structure and rheme are considered as one part on the lexicogrammar level. One of the parts showing textual meaning is clauses relation. The relation of clauses shows 'logical' components of the linguistics system that is semantic relation which make up the logic of natural language (Halliday M. , 1994, p. 216). There have been many studies relating to clauses or clauses relation conducted by researchers, such as (Atteveldt, 2016), Clauses Analysis; (Martin, 2014). Evolving systemic functional linguistics: beyond the clause; (Tam, 2013), The Notion of Clause Complex; (Farinde, 2015), Functional Values of English clause; (Barker, 1996), Clause –level relationship; and (Holsting, 2008),Projecting Clause Complexes and the Subjunctive Mood.

Theses writing for students of English study program of Artha Wacana Christian University is a final requirement to be fulfilled by them to get their undergraduate degree. In fact, based on the researcher's experience in teaching, she found out that students took times to write their thesis writing. This fact has been mentioned by (Ngongo, 2013) that " Writing a thesis for students of English study program of Atha Wacana Christian University, Timor, Indonesia is necessary for them as one of the requirements to be fulfilled in the undergraduate degree. Students must write a thesis based on their capacity, interest and field of study, such as teaching English or local languages. It is realized that writing thesis for students needs times to do it. Writing can be seen as a site of interaction between writers and readers." Moreover, it is stated by Thompson (2001) *in* Liu (2013) that through written texts, writers construct solidarity and alignment with potential or target readers. Therefore, a writer before writing should consider who the reader is.

This article was focused on taxis and logico-semantic relationship in text especially in discussion chapter of theses writing since based on the preliminary study it seemed that in discussion chapter students used more complex clauses. The use of these clauses should be related with each other to have cohesiveness or coherence. Therefore, the use of taxis and logico semantic relations are necessary in describing and interpreting the result of studies or findings. In this case this study can answer question 'how is logical clauses relationship in discussion chapters of theses writing in English? The aim was just to find out and describe taxis and logico-semantic relationship in text.

It is hoped that this study has beneficial not just to theory of systemic functional linguistics especially in clauses relation but also to practical ones, such as in instructional (teaching and learning) of academic writing in English. Other researchers can take for granted as a short reference to search other aspect of teaching and learning English.

This study was taken from ten academic writing or English theses writing texts written by ten undergraduate students who graduated on February 2016 from English study program at Christian Artha Wacana University, Indonesia. It was aimed to describe the undergraduate students' clauses relationship used in discussion chapters of English theses writing as final project for undergraduate students to fulfil one of requirements for undergraduate degree.

Based on the evaluation of examiners at that time these 10 students who wrote theses were graded 'A'. These

ten theses are purposively taken based on the purpose of this study that is to describe and analyse students' clauses relationship used, especially taxis and logico-semantic relation in discussion chapters. Those theses then were studied and analysed based on functional grammar theory. Therefore this type of study can be classified as documentary analysis. They were analysed descriptively by using matching method. There were some quantitative data that was used just to give more explanation or support qualitative data. Data were analyzed based on Linguistic Functional Grammar or known as Systemic Functional Linguistic Theory (Halliday M. , 1994); (Halliday & Matthiensen, 2004); (Eggins, 1994) especially on the part of taxis and logico- sematic relations.

RESULT AND DISCUSSION:

Clauses relationship in text refer to logical component of the linguistic system in which the functional – semantic relations that make up the logic of natural language (Halliday M. , 1994, p. 216). In other words, it can be said that the relation of clauses in text has semantic function that make up the language logically. Referring to this logical relation, moreover, it is stated by Halliday (1994) that there are two systemic dimensions in the interpresentation, namely system of interdependency or tactic system, parataxis and hypotaxis, and logico-semantic system of expansion and projection which is specifically an inter-clausal relation. These two dimensions are analyzed in the form of complex clauses since conplex clause covers these two dimensions.

Complex clause refers to a clauses relationship existing in sentence. "Semantically, the effect of combining clauses into a clause complex is one of tighter integration in meaning..." (Halliday & Matthiensen, 2004, p. 365). From this view it can be stated that clause complex combine some clauses in which meaning be tied integratively. A clause complex is marked differently from clause rank. A clause rank is labelled // ...//. Whereas, a clause complex is marked by a label |||…|||. These two marks show different marks. A clause complex is needed because in fact a clause connect or relate one clause to other in a specific way. Moreover, other specific marks are described in sub part of this article.

Thus, this discussion of this study covers the two types of clauses relationship, namely interdependency or taxis relationship and logico semantic relationship. Each of this part are described with some data or examples of clauses in text.

Interdependency Relation of clauses:

The relationship of clauses interdependency in text relates to taxis system. This taxis system relationship states whether the relation of clauses is equal or not (unequal). So, this level of interdependency has two different levels. Level of interdependency showing an equal status belongs to parataxis. While, level of interdependency showing unequal status or having two elements that do not have same status belongs to hypotaxis. Examples of data showing interdependency in text are as follows.

(1) // Some of students have their knowledge of English sentence pattern// but they didn't

understand the text well// and also didn't understand about the question// ...//Hence they got problem to answer the question//   (T1:40)

(2) //...there were 17 students get best score (9-10) // 12 students get better score (7-8) // and 1 studenr get good score (6) //   (T1:38)

(3) /// on of the factors // that can improve the students's skill in reading especially reading text in teahing// and learning process is motivation///   (T4:36)

(4) ///When the teacher address the question for students //, the students always answer in group//   (T4:37)

Based on the the examples number one to four, it can be seen that clauses relationship are connencted by the use of conjuncyion *but, and, hence* (as in number one and two). Whereas number three and four are connected by conjunctions *that, when*. These four examples show interdepency of clauses relationship.

Table 1: Primary and secondary clause in a clause nexus (Adapted from Halliday and Matthiessen (2004: 376)

Interdependency Relation	Primary	Secondary
Para taxis	1 initiating clause (independent clause)	2 continuing clause (independent clause)
Hipo hypotaxis	α (dominant (independent) clause	β dependent clause

The number use of clauses relation of parataxis and hypotaxis interdependency text of discussion chapters of theses students' writing can be seen on this table two.

Table 2: The number use of parataxis and hypotaxis in texts (discussion chapter)

Taxis Relationship	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	Total
Parataxis	6	11	4	19	14	5	13	2	4	11	89
Hypotaxis	13	10	16	26	30	16	19	16	9	17	172
Total	19	21	20	45	44	21	32	18	13	28	252

Table two shows the use number of parataxis and hypotaxis relationship of clauses in text. The number use of parataxis is 89 and hypotaxis is 172 of 252 total number of clauses relation. The use number of parataxis is more less than hypotaxis. This fact indicates that students tended to explain their interpretation using unequal status in which they applied to use hypotaxis relationship. The dominant clauses used can be preceded or followed by dependent clauses. It seems that students applied more use of hypotaxis than parataxis. This fact also indicates that the taxis relationship ether parataxis or hypotatxis used by students as writers showed clauses relationship. Therefore, there would be relationship of meaning of message written.

Parataxis Interdependency of clauses in text:
Parataxis interdependency of clauses as previously described relates to the relation of clauses that have equal status. Examples of data showing parataxis interdependency of clauses are as follows.

(5) // 1 in this activity// not only students get motivation but also// 2 the English teacher get the challenge to create the atmosphere…// (T5:37)

(6) //1 In the implementation process// the English teacher was implementing the procedure of scientific approach in teaching and learning process// 2 therefore the students can get understanding…// (T5:38)

(7) // 1The teacher gives the story for the students// 2 and then the students read all together// (T4:37)

The examples of clauses number five to number seven are clauses of interdependency that show parataxis relation. Those clauses have equal status that are connected by conjunction *and*, *therefore, and then.* The preceded clause is as first clause and it is followed by the second clause. Those clauses are potentially independent of one another. As Halliday and Matthiessen (2004:373) stated that one unit is interdependent on another unit. It means that two clauses have an equal status. The first one is initiating and the second is continuing. The relation of two clauses have the same status or in other words it can be stated that the two clauses are indepedepent clauses. Since the relation of clauses are equal in parataxis are numbered in sequence, namely '1' for the first clause and followed by '2' (Halliday and Matthiessen, 2004: 376).

Some other examples of conjunctions and continuatives used in texts are *but, for, so,, so that, then, such as, as well as.* This fact indicates that students wanted to keep the meaning expressed through the use of clauses relationship.

Hypotaxis Interdependency of clauses in Texts:
Hypotaxis interdependency states the relation of two elements that have unequal status. On the other words, it can be stated that dependent clause can not stand by itself and it must be combined to independent clause to make it meaningful. Examples of data showing parataxis interdependency of clauses are as follows.

(8) /// α In asking a question// the teacher gave the kinds of questions // β that are simple and easily understood by students…/// (T7:43)

(9) /// α questions should be brief and clear, with the words // β that the students understood./// (T7:44)

(10) ///It is a guide for students to organize their thought or plan // β before they write a complete paragraph…/// (T8:46)

(11) ///… α there are implication of of the method toward the students' improvement in writing // β because it can help the teacher to build the students' motivation…/// (T8:46)

The examples of clauses number eight to number eleven are interdependency clauses called hypotaxis. The relation of the clauses are unequal status. The relation of clauses is between a dependent element and independent element. The interdependency clauses is related by the use of conjunction as *that, before* and *because* The preceded are called dominant clause or independent clause while the second clauses are called dependent clauses.

Greek letter is used to mark hypotaxis. Symbol of α is on the main clause or dominant clause, and other symbol of β is symbol for dependent clause that must be attached to dominant clause (Halliday and Matthiessen,2004:377).

It is also clear seen that dependent clause was related to independent clause or dominant clause after textual theme before topical theme of main clause as in the example number eight. Therefore, textual theme are usually with main clause or independent clause then followed by dependent clause. This fact indicates that main clause is domain of complex clause while dependent clause as its qualifier. Thus, main clause usually preceded dependent clause that also has its own topical theme and rheme.

Other terms or conjunctions used in clauses showing hypotaxis interdependency are since, when, how, whereas, why, who, whether, which, after, until, while, if, etc.

Logico- Semantic Relationship of Clauses in Texts:

Logico semantic relationship relates to basic feature of clauses relationship. This relationship concerns to logico relation and semantic relation. Examples of data showing the use of logico semantic can be seen in these following:

(12) // 1 In this activity English teacher gave chance to the students …// + 2 and students must have the reason to choose the article//   (T5:34)

(13) //1 Some students have knowledge of English pattern // = 2 but they did not understand the text well // (T2:40)

(14)   // // 1 The teacher always give support for students // x 2 so that students are happy with the material// (T4:39)

(15)   /// α Teacher is a moderator and facilitator// β whereas students should be active …/// (T5:32)

(16)   /// α They do not prepare remedial class for the learners // β who might be slow in learning/// (T4:35)

The example number 12 to 16 show logico semantic relationship in clauses. Either preceding clauses or the continuing clauses have logical meaning. Relating to taxis relationship, clauses number 12 -14 are included as parataxis since the relationship of them are equal. While the examples number 15 and 16 are included as hypotaxis since the relationship of them are unequal. The two clauses number 15 and 16 have independent clause that are preceded by dependent clause.

Logico semantic according to Halliday and Christian (2004: 377-406) has two main types, namely expansion and projection. Expansion concerns to extention, enhancement and elaboration. While projection covers locution and and idea.

Expansion:

Expansion relates to expand of meaning of primary clause. Logic relation of expansion are in three ways of expanding, namely extention, elaboration and enhancement. The relation of extention is marked "+", elaboration mark is "=" and enhancing is 'x' . (Halliday and Christian, 2004: 377). The mark symbol of extention in these following examples show construction of parataxis and hypotaxis.

Extention:

Extention expands meaning by adding new thing, giving exception and offering alternative. The mark symbol of extention in these following examples show construction of parataxis and hypotaxis in clauses of text.

(17) // 1 The teacher gives the story to the students //+ 2 and all the students read all together///   (T4:37)

(18)   /// β While the students are reading// α teacher is only observing them without interrupting…/// (T4:41)

Example number 17 and 18 show logico semantic relationship of the two clauses. Example number 17 has parataxis relation interdendency, whereas example number 18 belongs to hypotaxis. Concerning to the logico semantic, the continuing clause or the second clause is expanded from the first clause in which there is addition of new meaning of clauses. Relating to logico semantic of expanding meaning as *all the students read together*. The example number 18 the clause followed by independent clause add information relating to a new thing, such as *teacher is only observing them without interrupting….*

Enhancement:

Enhancement expands meaning by adding thing that concerning to circumstances features such as time, place, cause, condition, result, etc. Symbol or mark of enhancement is "x" (Halliday and Matthiessen, 2004:413). Examples of enhancement in text are as follows.

(19) // …1 The attention will be focused on the students // x 2 so that the delivery of teaching material conveyed will be captured…//   (T7:45)

 (20) /// α They learn English// β because they want to improve their knowledge/// (T 10:39)

The examples number 19 and 20 show the existence of logico semantic relation among clauses. Clauses

1number 9 is parataxis, while clauses 20 is hypotaxis.

Elabortion:

Elaboration expands meaning by repeting, commenting, simplifying and determining in detail. Concerning to hypotaxis, elaboration especially is realized by non-restrictive relative. The symbol or mark of elaboration is "=" (Halliday and Matthiessen, 2004:399) . Examples of logico semantic showing elaboration are as follows.

(21) //Comprehension questions include the ability to grasp the meaning // =2 and significance of the material being studied//   (T7:42)

(22) /// α The teacher wanted to know // β how far the students' ability in observing and searching the information///   (T5:38)

Examples number 21 and 22 show logico semantic relationship among clauses. Those clauses are subtype of elaboration that develop the previous clause. Based on the example number 21 the following clause or continuing one add more detail information in which it is stated that *significance of the material being studied.* It is the same as number 22 in which the dependent clause gives detail information.

Projection:

Projection relates to expanding meaning by reporting, stating idea and fact. Locution and idea are two kinds of projection. It is found out that the use of projection covering of locution and idea were very limited. Even there were only four texts (T5, T8, T9 and T10) had this kind of projection. This fact might because of the channel of the text in which the text studied was written text.

Locution:

 Locution expands meaning by using reported speech/quoted speech. Symbol used for locution is ("). Quoted or reported speech according to Halliday (2004:378) must be projected from verbal process. Some examples of projection in text are shown in these following.

(23) /// α The writer can say // β that the two groups had equal achievement on teaching and learning process/// (T9:46)

(24)   /// α The respondents said // β that they interested in learning// because their teacher gave them motivation…///   (T10:40)

The examples number 23 and 24 show an expanding meaning of projection by the way of locution. Based on the data there are only two texts (T9 and T10) have locution.

Idea:

Idea expands meaning by reporting thought or called reported/quoted thought. Idea uses mental process to reported thought and symbol mark used for idea is ('). Some examples of idea used in clauses of texts are as follows.

(25) /// The writer thought // that the students knew something related to the material given them/// (T5:34)

(26) ///The writer hypothesizes that: " Four Square writing method improve students' writing skill …"/// (T8:44)

Examples number 25 and 26 show the type of projection that expand meaning by reporting idea. Idea is projected by the use of mental process as *thought* and *hypothesize.* Students used very few number of idea. Only two texts (T5 and T8) expand meaning using idea.

CONCLUSION:

Logical relation of clauses in discussion chapters of theses writing in English covers taxis or logico syntactic and logico semantic. The relation of logico systactis concerns to parataxis and hypotaxis. The use of parataxis in text shows the relationship of two clauses that have equal status whereas hypotaxis show the relationship of unequal status of clauses. The use of conjunction showing relationship has more varieties than parataxis. This fact might because of the text analysis was in written form. When it was compared with spoken text the use of conjunctions showing parataxis relationship has more varieties than hypotaxis. (Ngongo, 2013); (Ngongo, 2015)

Logico semantic relationship showing expanding meaning using expantion and projection are also found in text. The use of expansion is more than projection. It is different from spoken text in which the use of projection is more than expansion. (Ngongo, 2013); (Ngongo, 2015). It was very limited use of locution and idea. Therefore it is suggested that students must be trained more in using clauses relationship especially in teaching and learning process of academic writing course. The use of logico systactic and semantic relationship is so important to determine the coherence and cohesiveness of the text as a unity of structure and texture of the text.

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