Transitivity Analysis in English for Logistics: A Systemic Functional Linguistic Study

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Abstract

This study discusses the transitivity process. transitivity helps us in understanding the relationship between subject, object, and action in a sentence. This research aims to determine the process type of English clause in English for Logistics Books by Grussendorf (2009). The data is obtained from six reading comprehension articles contained in the book. The main theory used a transitivity system based on Halliday & Matthiessen (2014b). The method used qualitative description. The result of this research states that four types of processes are used in this research. They are the material, mental, relational, and verbal processes. The dominant frequency of occurrence process in this research is the mental process as much as at 35%. This research may involve ESP teaching process, especially for Logistics Business Students.

INTRODUCTION

Using a textbook is fundamental to most language curricula (Richard, 2020). It serves a significant role in the field of language teaching. The various types of textbooks are distinguished by their respective characteristics. 1. The first category pertains to providing information. 2. The second category involves referencing and illustrating concepts. 3. The third category pertains to controlling variables in the study. The text discusses various academic files, such as assignment forms and exam cards. According to Nikonova et al. (2016), the textbook is a model for acquiring knowledge within a particular field of study. It is intended for use by students and is available in both print and electronic formats.

The English textbook serves as a teaching medium for students in various academic disciplines. The use of English for Specific Purposes (ESP) was utilized. Febriyanti (2018) cites Hutchinson and Waters (1987) to assert that English for Specific Purposes (ESP) is a pedagogical approach that involves the use of topics that are relevant to the learner's specific needs and goals for learning English. ESP refers to a discipline in English language teaching that seeks to assist

students with their academic writing assignments. The ESP methodology is evident in the differentiation between specific and general approaches to teaching English (Salmani-nodoushan, 2020). The Oxford Express series comprises 21 textbooks for learning English for Specific Purposes. An English textbook titled "English for Logistics" will be examined through the lens of the functional grammar approach, specifically the transitivity process.

Several researchers have analyzed the transitivity process in written text. There are three focuses on research analyzing transitivity under the lens of SFL. Those are students' essays (Nurkholidah et al., 2019; Salsa & Kemal, 2023; Yulianawati & Anggrarini, 2022; Zein et al., 2019); research article (Hendrawan et al., 2022; JAIYEOBA & ONIPEDE, 2023; Jana, 2023; Vathanalaoha & Tangkiengsirisin, 2018; Zheng, 2021) and English textbook (Bondar et al., 2018; Khalil et al., 2022; Khorina, 2020; Surbakti, 2020; Tampubolon, 2019).

Out of all research above, only Khorina's research analyzed the transitivity process in English engineering text. Khorina (2020) investigated the process type frequently occurring in the data. The result shows only three types of processes: material, relational and existential. The dominant is the relational process. The research focuses on English for Logistics, which no one has researched. Thus, the researchers aim to analyze transitivity to know the processes applied in English for Logistics. The researchers apply the types of processes in articles on reading comprehension in English for Logistics Book. The book was published in 2009. The main author is Marion Grussendorf. The book covers a range of subjects associated with the logistics industry, and it is used as learning media for students majoring in Logistics Business.

The reason why researchers use process transitivity as a topic is that in transitivity analysis, we can identify actors who perform actions in sentences. It helps us understand who is responsible for an action or event and we can analyze the social relations contained in sentences. For example, we can see how power, dependence, or influence manifests in the relationship between agents and actors.

Based on the introduction above, the research problems are formulated as 1) what type of processes appear in English for Logistics Book, and 2) What the dominant process is used in English for Logistics Book.

METHOD AND THEORY

The researchers used a descriptive qualitative method. It is usually used to analyze the structure of the clause. The data source is from six articles on reading comprehension In English for Logistics Book by Grussendorf (2009). It was published in 2009. Now, this book is used as media learning for students majoring in Business Logistics at one of the universities in Bandung. The researchers collected and analyzed data based on Miles dan Huberman (in Rijali 2019). The stages of the research are presented in Figure 1:

Figure 1: Collecting and Analyzing Data (Miles dan Huberman,1992)

First, collect the data from six articles in the book, then select the clauses based on the research question. Next, analyze the clauses and find the dominant types of processes in the data. After that, the researchers took the conclusion of the research.

Systemic Functional Linguistics

Some linguistics knows the functional grammar approach as a systemic functional linguistic (SFL). In SFL, there are three different functions in the clause. It is called the three metafunction. According to Halliday & Matthiessen (2014), metafunction refers to three distinct functions in the clause. They are interpersonal meaning, textual meaning, and representation meaning.

Interpersonal meaning refers to the grammatical choice that enables the speaker to communicate with the listener or others. Based on Sujatna (2013), interpersonal meaning focuses on the subject's function in the clause's structure. Interpersonal meaning explains whom the speaker wants to speak to other. It is called a clause as an exchange. It talks about mood and residue. The mood is a system that realizes the subject's position is finite, while another element in the structure of the clause can be called the residue.

Textual meaning expresses how language relates to its environment. Based on Bloor & Bloor (2004), language relates what is said (or written) to the rest of the text or other linguistic events. The subject of the clause is called the theme. It expresses the point of the message. In comparison, another element as information of the message is called rheme.

Experiential meaning is a process that talks about a human experience that covers ideas, feeling, sensing, saying, happening, existing, and behaving. Based on Halliday & Matthiessen (2004), it is categorized into six types of process. They are the material process, mental process, relational process, verbal process, existential process, and behavioral process.

Transitivity
1. Material Process

The material process is a process of doing and happening. It talks about human experience and constructs the other aspect of human experience itself. Based on Thompson (2014) it was said that the material process involves processes of physical activity such as running, cooking, drawing, and so on. The material process has several participants. The actor is the participant who describes someone or thing doing a process. The goal is the result of the process, and circumstance talks about the adverbial or the information of the time, place, manner, reason, etc. Based on Halliday & Matthiessen (2014b) in Septiana et al. (2019), types of doing can be divided into creative material clause and transformative material clause. The creative material clause is a clause transitive or intransitive that can not be separated. The transformative material clause is a clause with adding the circumstance in a clause. The examples can be shown below:

"*Mother is cooking the rice in the kitchen*".

Mother	*is cooking*	*the rice*	*in the kitchen*
actor	Process: Material	Goal	circumstance

The word "mother" describe someone who is doing the process, and the verb "is cooking" explains the process. "the rice" is a goal. It describes the result of the process doing. Furthermore, the last, " in the kitchen" as a circumstance, is the information of the place.

2. Mental Process

The mental process is a process of feeling, thinking, and perceiving. According to Halliday & Matthiessen (2014a) a 'mental' clause construes a quantum of change in the flow of events

taking place in our own consciousness. This process of sensing may be construed either as flowing from a person's consciousness or as impinging on it; but it is not construed as a material act. The Subject in mental process is same that is subject as a speaker. The main participant can called a senser of the experiencer. Another participant is a phenomenon. It explains the experiencer such as feeling, thinking, or receiving. In addition Sujatna (2012), process is the center of transitivity that is represented by verbs. They are verbs of perception, cognition, desideration, and emotion. An example of a mental process is shown below:

2) "*My mother likes Korean's Drama*".

My mother	*likes*	*Korean's Drama*
senser	Process: Mental	Phenomenon

Example (2) above tells the words "my mother" a senser or experiencer because she is someone who feels the phenomenon of Korean Drama.

3. Relational Process

According to Gerot and Wignell (in Rohmat et al., 2018) " relational process can be classified according to wheater they are being used to identify something or to assign a quality to something." It is attributive or identifying. The participant of attributive is a carrier as a subject and attribute as a subject complement. While identifying, the subject is called token and the other participant is value. The difference between them is attributive can not be reversible like copular clause, but identifying can be reversible like active to passive voice. The examples are shown below:

"*She is a doctor*".

She	*is*	*a doctor*
Carrier	Attributive	Attribute

"*Father changes his car*".

Father	*changes*	*his car*
Value	Identifying	Token

Example (3) shows the subject as the carrier and the words" a doctor" as an attribute. The verb " is" is called attributive. In SFL, this clause is included in a copular clause. The clause does not have an object and all the elements can not be separated. While example (4) describes the word "father" as value and the words " his car" as a token. The verb "changes" is called identifying. This clause can be changed into passive voice.

"*His car is changed by father*".

His car	Is changed	By father
Token	Identifying	Value

4. Verbal Process

Halliday & Matthiessen (2014b) states the verbal clauses are all except for one accompanied by quotes. Based on Sujatna (2013), the verbal process is a process of saying. The participant is included in verbal processes that are subject to the sayer and another participant usually called target or verbiage. The distinction between target and verbiage can explain below.

"*the teacher told the final exam last week*".

The teacher	told	The final exam	Last week
sayer	Process: verbal	verbiage	circumstance

"*The teacher remaind the student about the final exam last week*".

The teacher	*remaind*	*the student*	*about the final exam last week*
Sayer	Process: verbal	Target	circumstance

The examples of (6) and (7) have the same participants. The word " the teacher" is used as sayer, but other participants have different functions. The words " the final exam" is called verbiage. It refers to something that the sayer said. While the words " the student" is target. It refers to someone who gets the information from the sayer. Other participant expresses the information that is called circumstance.

5. Existential Process

Existential process represent that something exist or happens (Halliday & Matthiessen, 2014b). In addition, Sujatna (2013) states that an existential process is a process of existing or happening. The word "there" has no functional representation. The verb is called existential and the other participant is existent.

"*There are many cars in parking area*".

There	*are*	*many cars*	*in parking area*
	Process: Existential	Existent	Circumstance

The example (8) shows the word "there" has no representation function in that clause.

6. Behavioural Process

The behavioral process is a process that is related to physiological or psychological behavior. The participant is called behaver.
"*she smiles*".

She	*smiles*
behaver	Process: behavioural

The example above shows the verb " smiles" as psychological behavior, and the subject "she" is called behaver.

RESULT AND DISCUSSION

The researchers presented the data taken from six articles on reading comprehension in English for Logistics Book. The clauses were analyzed into types of process transitivity systems. They are the material process, mental process, relational process, verbal process, existential process, and behavioral process. This research found 57 data, and it analyzed all of them. The data analysis can be shown in Table 1 below.

Table 1. Processes Frequency

Process	Frequency	Percentage
Material	20 data	35%
Mental	21 data	36,8%
Relational	13 data	23%
Verbal	3 data	5,2%
Behavioural	-	-
Existential	-	-
Total	57 data	100%

Table 1 above explains the frequency of occurrence of transitivity process in English for Logistic Book. It represents only four type of processes that appear in the data. They are the material process at as much as 35%, the mental process at as much as 36,8%, the relational process at as much as 23%, and the last verbal process at as much as 5,2%, which implies that the mental process has dominated occurrence of the process in the data.

a. Material Process

The material process is a process of doing and happening. In this case, 20 data refer to the process of doing and happening. The sample of data can be analyzed as below:

1) *"China handles more cargo than any other country in the world".*

China	handles	More cargo	Than any other country in the world
Actor	Process: Material	Goal	circumstance

2) *"The GPS device offers several programming options".*

The GPS device	offers	Several programming options
Actor	Process: Material	Goal

The data (1) and (2) shows that the words "China" and "The GPS device" can be categorized as an actor. Both of them are doing the process. The verbs " handle and offers" are called a process of doing. It refers to the activity done by the actor. Therefore, "more cargo and several programming options" are the goal. It is related to an object in that clause. Other participants appear in that circumstance in words "than any other country in the world."

b. *Mental Process*

The mental process is a process of thinking, feeling, and perceiving. This research has 21 data that are included in the mental process. The data will be shown below:

3) *"In the past, warehouse was only seen as a place to store things".*

In the past	wareh ouse	was only seen	As a place to store things
Circumstance	Senser	Process: Mental	Phenomen on

4) *"Barcodes enable warehouse staff to track and trace all in the warehouse at any given time and usually realtime."*

Barc odes	enable	Warehouse staff	to track and trace all in the warehouse at any given time and usually realtime
Sens er	Process: Mental	Phenomen on	Circumstanc e

The data (3) and (4) show the mental process. The verb "seen" refers to the perception verb, while "enable" refers to the cognition verb. The words " Warehouse and Barcodes" are called senser or experiencer, and the phenomenon can be seen in the phrase " as a place to store things" and " warehouse stuff."

c. *Relational Process*

The relational process expresses the verb that can describe the participant's state and identify something. In this case, the researchers found 13 data, and one of them can be shown below:

5) *"For transport logistics, Shanghai is one of the most attractive locations in China".*

For transport logistics	Shang hai	is	one of the most attract ive locati ons	in China
Circumst ance	Carrie r	Attribu tive	Attrib ute	Circu mstan ce

Data (5) explains that the word "Shanghai" is a subject and the words" one of the most attractive locations" as a subject complement. The verb "is" is a linking verb. Moreover, in the relational process, the subject can be called carrier, and subject complement is attribute. This data is included in the relational process attributive.

d. Verbal Process

A verbal process is a process of saying. The clause can be direct or indirect speech. This research found 3 data. All of the data is shown below:

6) *"Operator BAA said that it would be put the airport at the cutting edge of global travel".*

Operator BAA	said	that it would be put the airport	at the cutting edge of global travel
Sayer	Process: Verbal	Verbiage	Circumstance

7) *"BA said that they the first day would be critical because of the size and completly of the move into terminal 5".*

BA	said	that they the first day would be critical because of the size and completly of the move into terminal 5
Sayer	Process: Verbal	Verbiage

8) *"BAA claimed that checking in for flight would be simpliefied for up to 30 milions passagers a year by online check-in fast baggage dropping facilities and sophisticated baggage handling".*

BAA	Claimed	that checking in for flight would be simpliefied for up to 30 milions passagers a year	by online check-in fast baggage dropping facilities and sophisticated baggage handling
Sayer	Process: Verbal	Verbiage	Circumstance

The data (6, 7, and 8) show the verb "said and claimed" as a verbal process.

The subject "Operator BAA, BA and BAA" is used as sayer. The researchers did not find participants as targets; they all are the same participant, verbiage.

Meanwhile, the behavioral and existential processes are not found in this research. The research only found four types of processes. They are Material Process, Mental Process, Relational Process, and Verbal Process.

CONCLUSION

In conclusion, only four types of transitivity occur in English for Logistics books. They are the material, mental, relational, and verbal processes. The mental process dominates the process in this research by as much as 36,8%.

The differences between this research and the previous research are that the researchers found that the most different process occurred, the mental process. However, the previous research found mostly relational processes in other genres of English textbooks.

This research can be useful for the next researcher who wants to analyze the same topic and can be considered one of the references.

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