Cohesion in journal articles on applied linguistics: the case of conjunction "thus"

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Abstract - Cohesion plays an important role in building the readability and comprehension of a text. Instead of lexical, reference, substitution and reference, a conjunction is also important in a text. One of which is "thus" which shows how the message is packaged in the text. Journal articles become the major source for scholars to share and connect their ideas. The 'standard' writing including content and format is one of the concerns in the article publication. The employment of conjunction in the article is important to show the author's logical connection of her or his ideas. By employing discourse analysis by Halliday and Hassan, this paper aims at finding out the cohesion of journal articles of applied linguistics seen from the employment of conjunction "thus" adopting Martin and Rose's theory on logical connection. Purposive sampling method was conducted by taking forty journal articles on applied linguistics. AntConc, a corpus web, was employed to help the researches figure out how conjunction "thus" is used in the text in building the cohesion of the data.

Keywords: conjunction, cohesion, corpus, journals

1. Introduction

Writing a research paper involves the significance of not only the presentation of new ideas but also writing skill. A research paper, categorized as academic writing, requires particular sections whose purposes are distinctive. In general, a research paper contains introduction, methods, result, and discussion. The introduction shows the main purpose of the paper containing the hypothesis or research questions to investigate. It is also a place in which the author attracts the readers. The methods should describe in details on how the materials, procedures and data are observed. The result part shows the findings of the research, while the discussion part offers an increasingly generalized account of what has been observed in the research (Swales & Feak, 2001, pp. 156-157).

In writing, the role of sentence and discourse effectiveness is an important matter. It is also a process of expressing ideas or thoughts by wordings (Agustina, 2015). One of the ways of expressing ideas is the presence of conjunction. Conjunction is described as "a word whose function is to connect words, phrases, or sentences syntactically while characterizing semantic relations between those elements" (Bussmann, 2006, p. 231). Conjunction functions not only to relate words, phrases or clauses, but also display the writer's way of thinking. The clarity of ideas in a writer's mind is helped by the presence of conjunction. Furthermore, conjunction also helps readers comprehend the ideas presented by a writer.

Packaging ideas in concise and clear manners is one of the concerns of linguistic study. In the Systemic Functional Linguistics (SFL) point of view, how the message is put in wordings is one of the functions of language, textual functions. Here, the language user has the freedom to choose particular patterns to show the message. The use of conjunction is able to show the author's or language user's logical connection. "These are logical meanings that link activities and messages in sequences" (Martin & Rose, 2007, p. 115). In sum, conjunction is a marker of the writer's logical relation.

Martin and Rose propose two kinds of conjunction: internal and external. The internal conjunction deals with experience as logically organized sequences of activities, whereas the external conjunction is about how conjunction presents discourse as logically organized waves of information (Martin & Rose, 2007, p. 116). Though it is separated into two different categories, conjunction basically consists of four types of logical relation: addition, comparison, time and consequence (Martin & Rose, 2007, pp. 116-117). Internal conjunction is the system for logically organizing discourse, while external conjunction is the system for linking events in an activity sequence (Martin & Rose, 2007, p. 117).

Writing requires cohesion, a term in SFL referring to the property of "connectedness that characterizes a text" (Mahlberg, 2006). The problem appears when a conjunction can be used to substitute another which carries different logical relation. For example, conjunction "thus" can be used to show consequence or time. This paper attempts at finding out how conjunction "thus" is used in both Indonesian and foreign journals on applied linguistics. This research is provoked by the necessity for scholars to publish articles in reliable journals. The way a research is written, particularly on the employment of conjunction, is the main concern of this paper. By observing how conjunction "thus" is employed in the articles published by Indonesian and foreign journals, the logical connections in the two types of journals can be revealed.

To figure out the logical relation brought by conjunction, analyzing separate text is not enough. The analysis should start by considering text as a discourse which is

related to cohesion and coherence of a text. Cohesion deals with the study of texture concerning the interaction of cohesion with other aspects of text organization. On the other hand, coherence takes the social context of texture into consideration (Umami, 2013). Halliday & Hasan mention that Discourse Analysis (DA) pays attention to texture in a text which is connected or attached jointly to shape a cohesive unity and setting of the text (Michael, Muthusamy, Suppiah, Joseph, & Che Razali, 2013).

Studies on similar topic have been conducted by some scholars. The comparison of argumentative English assignments by Iraqi and Australian postgraduate students was observed by Al Bakaa (2014). The paper investigated the textual structures of the writings by taking four academic assignments in terms of theme and rheme employment. The paper found that non-native speakers of English failed to use theme appropriately to construct academic writing, which is different from Australian writings. This disadvantage is caused by the writing curriculum in Iraq (Bakaa, 2014).

Research article on rhetorical organization was paid attention to by Öztürk (2018) in the way whether research article with and without subsections have different organization and how research article introductions with subsections are rhetorically organized. The research took 50 research article introductions and utilized theory by Swales. The research found that RA with subsections and without subsections have different organization. RA with subsections are shorter and simpler in structures. It also indicates that subsections are not independent, yet reviews of literature are integral parts of the RA introduction (Öztürk, 2018).

Coherence and cohesion in the Iranian EFL students were observed to figure out the implication of textual metafunction teaching to the experimental group by Paziarie (2013). The research focuses on how the Iranian EFL students' writings improve after the experimental group learnt how to structures essays by considering coherence and cohesion as textual metafunction concerns. The research involved two groups to compare: control and experimental groups. The results of students' pre-test and post-test were compared by means of t-test analysis. It is figured out that students' learning textual metafunction develops their coherence and cohesion in essay writing. The study also suggests that textual metafunction should be put in the writing curriculum (Paziraie1, 2013).

Provoked by some studies above, this present study offers a more specific area by observing a conjunction, "thus". The researchers assume that the role of "thus" in an essay is important as it becomes a key word to figure out the important part of a paper, whether it reveals time, manner/means, or consequence. Another reason attracting the research is to compare Indonesian and foreign journal articles. Conjunction is important to support text cohesion. Cohesion is mentioned to be located beyond the sentence or clause, yet it is located in the meaning (Emilia, Habibi, & Bangga, 2018). This paper then, will suggest some ideas to researchers on how important a conjunction is to be put in a paper. By considering the findings between two data, researchers are suggested to pay more attention to language use as it shows logical relation which eases the readers to digest the ideas presented.

2. Method

This paper was analyzed by means of Discourse Analysis. The focus of analysis is on the textual function of language as proposed by Halliday. In the textual function, the

use of conjunction 'thus' as proposed by Martin and Rose is the concern here. Conjunction is an important part of cohesive text which has tendency to link its sentences as one semantically (Michael, Muthusamy, Suppiah, Joseph, & Che Razali, 2013). To limit the analysis, four journals become the sample, two Indonesian and two foreign journals, in which ten articles were randomly chosen from each journal. The Indonesian journals chosen are those indexed in Sinta 2, an accreditation website arranged by Ministry of Research and Higher Education. The two Indonesian journals are CELT, published by Soegija Pranata Catholic University and Lingua Cultura, published by Bina Nusantara University. The foreign journals employed here are Scopus indexed, Gema Online published by Universiti Kebangsaan Malaysia and International Journal of Applied Linguistics & English Literature, published by Australian International Academic Centre. In total, there were 40 articles to observe.

With the help of a corpus tool, Antconc, the number of 'thus' in the articles, concordance and context of the word can be figured out. Antconc is a corpus tool developed by Laurence Anthony aiming at offering a free corpus analysis toolkit for concordancing and text analysis. The journal articles as the data were saved as .txt format and input in Antconc. The data were grouped into two: Indonesian and foreign journals. The twenty articles from each journal category were opened at the same time. The same method was applied for foreign journals. In this step, the word list of the articles was focused on conjunction "thus" so that the frequency of conjunction in two groups of journal can be found. The next step was paying attention to the context of thus to reveal the type of conjunction, internal or external, and its logical relation. The last step was finding out the concordance of conjunction "thus" in the data and concluding how "thus" is involved in journal articles.

3. Results and Discussion

There are four logical relations in textual metafunction: addition, comparison, time and consequence. Based on the analysis, the table below presents the types of logical relation which conjunction "thus" brings. The table also shows the comparison between Indonesian and foreign journals' presence of the conjunction.

Table 1 The Logical Relation of 'thus' in Indonesian and Foreign Journals

	Indonesian Jo	ournals	Foreign Journ	als
	Frequency	Percentage	Frequency	Percentage
Internal Consequence	17	43.59	68	58.11
(Concluding)				
External Consequence	22	56.41	49	41.88
(Means)				
Total	39	100%	117	100%

Referring to table 1, both groups of data have the same types of conjunction: internal consequence and external consequence. From the total frequency of conjunction "thus", Indonesian journals only employ 39 numbers, while foreign journals involve 117 numbers. The different frequency is significant considering that both groups have similar number of pages and words in each article. Though the types of conjunction are similar, the percentage of both types are distinctive in the two groups. It is obviously seen that Indonesian journal articles employ external consequence more than foreign journal articles, which are dominated by internal consequence.

Instead of having different use of conjunction in the articles, Indonesian and foreign journals also differ in the way conjunction "thus" is employed. Below is the summary.

Table 2 Summary of Concordance Plot in the Journals

No	Concordance Plot	Indonesian Journals (percentage)	Foreign Journals (percentage)
1.	Abstract	5.1	5.1
2.	Introduction	33.3	12.8
3.	Literature Review	10.3	6.9
4.	Methodology	5.1	1.7
5.	Findings and Discussion	35.9	69.2
6.	Conclusion	10.3	4.3

According to the concordance plot of the conjunction "thus" seen in Indonesian Journal, it is seen that the conjunction is used mostly in Findings and Discussion. However, the percentage is close to the use of the conjunction in Introduction. Compared to the concordance plot in Foreign Journal, the conjunction is also used mostly in Findings and Discussion. The percentage number of using conjunction "thus" in Findings and Discussion is, however, far from the percentage number of conjunction "thus" used in other parts of the journals. In the other words, conjunction "thus" becomes dominant in Findings and Discussion in Foreign Journal than in Indonesian Journal. In addition, in both Indonesian and Foreign Journals, Methodology becomes a part where the conjunction "thus" appears least of all.

Logical Relation of Conjunction "thus" in Indonesian Journals

In Indonesian journal, conjunction "thus" is categorized as internal conjunction, particularly showing conclusion. Below is the example.

I.J.1 Meaning does not only contain a sign, but it only could be interpreted by someone who has a series of concepts (Hall, 1997). **Thus** the representation can never be separated from the socio-cultural realities.

The context of the datum above, which is seen from the first sentence of the datum, is about meaning which only could be interpreted by concepts. The second sentence in the datum is about the relation between the representation and the socio-cultural realities. The second sentence seems to conclude the first sentence by connecting the idea of representation and the socio-cultural realities. It is seen that the second sentence of the datum is concluding the first sentence. Therefore, the conjunction "thus" in the datum above is categorized as internal consequence conjunction.

Another example of internal conjunction showing consequence is found below.

I.J.10 Meanwhile, class B gets the lowest percentage both for students' positive language knowledge and in use. **Thus**, it can be said that the sufficient knowledge of the positive language that the students have, the better a positive language in use in their classrooms can be established.

Similar to the first datum, this datum also consists of conjunction "thus" which is categorized as internal consequence conjunction. It is seen from the relation between the two sentences in the datum above. The first sentence discusses class B's lowest percentage in students' positive language knowledge and in use. The second sentence discusses the relation of sufficient knowledge of positive language and the positive language in use in classes. The second sentence is concluding the first one. Therefore, the conjunction "thus" in the datum is internal consequence conjunction.

The following excerpt is found in Indonesian journal whose conjunction is also categorized into internal one.

I.J.37 Writing is an activity that arranges the words into a sentence, sentences into a paragraph, and paragraph into a good text. **Thus** writing is combination of process and product.

The context of the datum shown above is about writing. It is said in the first sentence of the datum that writing is a form of activity consists of several processes and ends up with a good text. The second sentence of the datum above discusses writing as a combination of both process and product. It is seen that the second sentence is showing the act of concluding the first sentence. Therefore, the conjunction "thus" in the datum shown above is categorized as internal consequence conjunction.

Instead of using internal conjunction in their articles, Indonesian journals also contain conjunction "thus" categorized as external conjunction. The following extract also shows the example.

I.J.4 It means that the candidates exploit the language, whether by word or grammar to achieve their goal in this event. The candidates use it in different ways based on their goal and their background. **Thus**, the researcher wants to know how the candidate achieves their goal by language.

The context seen from the datum stated above is achieving goals by the language used. The first sentence of the datum discusses how the candidates use words or grammar in order to achieve their goals. The second sentence states that the use of language of one candidate is different from another based on their own purposes. The third sentence of the datum says what the researcher wants to study from the data mentioned previously, which are the use of language and the differences in using language seen in one candidate compared to another. The conjunction "thus" in the third sentence is considered as external consequence conjunction because it shows the next event, which is in this context is what the researcher wants to do after getting the data.

The extract below displays another example of conjunction "thus" performing externally.

I.J.30 Is there positive relationship between the students' perception on the teacher-student relationship and their learning outcome? **Thus**, the null hypothesis of this study can be defined as "There is no relationship between the students' perception on the teacher-student relationship and their learning outcome".

The first sentence in datum I.J.30 is in the form of question, whether there is positive relationship on teacher-student relationship and the learning outcome. To answer this question, there should be a null hypothesis, therefore the next step is to decide the null hypothesis, that is there is no relationship between the students' perception on the teacher-student relationship and their learning outcome. Those two sentences show sequence of events. It explains that conjunction "thus" in datum I.J.30 is considered as external conjunction.

The last example from the data displaying "thus" as external conjunction is shown below.

I.J.34 There are 6 students, who did not submit their final draft of the pretest. **Thus**, they should be dropped.

From the datum above, it is seen that the first sentence says about six students not submitting pre-test final draft. The second sentence of the datum states that those six students should be dropped. It seen that the second sentence shows the next event happens after the act in first sentence occurs, which states that the students should be dropped because they do not submit their pre-test final draft. Therefore, conjunction "thus" in the second sentence of the datum above is categorized as external consequence conjunction.

Looking closer at the presence of conjunction in Indonesian journals in terms of its concordance plot, the table below shows the summary.

Table 3 Summary of Concordance Plot in Indonesian Journals

No	Conjunction Category	Concordance Plot (%)						
		Abstract	Introduction	Lit. Review	Method	F&D	Conclusion	
1.	Internal	0	38.5	50	100	42.9	50	
2.	External	100	61.5	50	0	57.1	50	

Based on the chart shown above, in Indonesian Journal, all conjunction "thus" appear as external consequence conjunction in the abstracts. However, all of them used as internal concluding conjunction in the methodology parts. Besides, in the conclusions, both categories share similar percentages, which means that the conjunction "thus" in the conclusions are used as both internal concluding and external consequence conjunction.

The data above, apparently, show that the conjunction "thus" is used in different parts from where it is supposed to be. As an internal conjunction, it is supposed to show the act of concluding. Then, it is noted that this internal conjunction is used mostly in the conclusion part as it is a part where the writers conclude their results of studies.

However, in conclusion part, the conjunction is not used as internal conjunction dominantly.

In addition, as an external conjunction, "thus" is supposed to show the sequence of events. It reveals that this external conjunction dominates in methodology part as it is a part where the writers tell the steps of their studies. However, in Indonesian journal, surprisingly, there is not any conjunction "thus" used as external conjunction in methodology part. All of the conjunction "thus" in methodology part of Indonesian journal is used as internal conjunction.

Logical Relation of Conjunction "thus" in Foreign Journals

Similar to Indonesian journal, foreign journal articles also involve internal conjunction. The difference lies on the frequency which internal conjunction appears. As seen in table 1, foreign journal articles employ internal conjunction more than Indonesian journal articles. Below is the example.

F.J.43 This study enlightens the usage of colour-coded system as a form of indirect corrective feedback for language instructors specifically in EFL context. **Thus**, the pedagogical implication of this study is that colours could be used as a form of indirect corrective feedback due to its ability to immediately direct students' focus towards specific grammatical errors.

The first sentence discusses how the use of colour-coded system can be an indirect form to correct in EFL context. The writer then uses the conjunction "thus" to connect it to the second sentence, which is about colours to give corrective feedback due to its ability to change the students' focus to the grammatical errors. The second sentence emphasizes more to the conclusion that the pedagogical implication of the study.

The following datum also involves conjunction "thus" internally in the text.

F.J.46 Providing corrective feedback in abundance could somehow trigger anxiety and confusion to students due to having an entire paper marked with symbols or codes in red (Ryan, 2012). **Thus**, it is significant to enhance students' positive attitudes in learning which could further sustain cognitive retention because it may contribute to better academic achievement.

In datum F.J.46, the conjunction "thus" is used to conclude that it is important for students to have positive attitude so that they can accept feedback positively and later contribute to a better academic achievement. The presence of "thus" above concludes the necessity of corrective feedback.

The last example of internal conjunction "thus" in foreign journal article is shown below.

F.J.117 In addition, subtitles bring convenience to students in that they can easily under \neg stand the movie content and vocabularies. **Thus**, they can learn better if they feel comfortable.

In the first sentence of datum F.J. 117, subtitle is described as a tool to make students feel convenient in understanding the movie content and the vocabularies. This

tool, subtitle, then makes the student learn better since it is more convenient. Here, "thus" is put after the argument of the role of subtitles in the movie. Therefore, "thus" is categorized into internal conjunction showing conclusion.

In foreign journals, conjunction "thus" is also used externally. The sample below displays conjunction "thus" categorized as external conjunction.

F.J.2 Sakum is also a close friend of Srintil in (15). **Thus**, Srintil can tell him honestly what she feels.

As what is seen in the short datum above, the first sentence discusses the relationship between Sakum and Srintil which as close friends. The second sentence states that Srintil is able to be honest about her feelings to Sakum because Sakum is her close friend. It can be concluded that the second sentence is the act which happens due to the relationship stated in the first sentence. Therefore, the conjunction "thus" in the datum above is categorized as external consequence conjunction.

Another datum employing external conjunction is found below.

F.J.40 This consciousness seems to have largely influenced the bulk of Nigerian authors' acceptance of the Nigerian English idiom as a linguistic identity, and this has thus constrained most of the linguistic features used in their works.

The use of "thus" here is also to show the sequence of event, specifically the sequence of causes-effects. The linguistic features used by Nigerian author are constrained because the consciousness seems to have largely influenced the bulk of the authors' acceptance of the Nigerian English idiom.

The last example of external conjunction "thus" in foreign journal article is found below.

F.J.107 Because of her insecurities, she wants to create human bondage with other people to keep her solace. **Thus**, she tries to maintain bonds with her new neighbors.

From the datum above, it is seen that these sentences discuss someone's insecurities, called as "she". The first sentence talks about the effect of the insecurities which makes her think that she needed to be closer to other people. Due to this effect, as what is stated in the second sentence, she tries to maintain relationships with people around her. It can be concluded from this datum that the second sentence is the act happens due to the effect stated in the first sentence. Therefore, the conjunction "thus" used in this datum is categorized as external consequence conjunction.

Observed from the category of internal and external conjunction, the table below shows the concordance plot in which conjunction "thus" is involved in foreign journals.

Table 4 Summary of Concordance Plot in Foreign Journals

No	Conjunction Category	Concordance Plot (%)						
		Abstract	Introduction	Lit. Review	Method	F&D	Conclusion	
1.	Internal	83.3	40	62.5	50	59.3	80	

2.	External	16.7	60	37.5	50	40.7	20
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Based on the table shown above, it is seen that internal concluding conjunction dominates foreign journals, compared to external consequence conjunction. The biggest range of percentages between these two categories is seen from the abstract part. It is then followed by the conclusion part. Both parts have internal concluding conjunction leading the percentages.

Different from what is discussed in the previous chart description, in foreign journals, conjunction "thus" seems to be in parts where it is supposed to be. As an internal concluding conjunction, which shows the act of concluding, it shows its significance in conclusion part. It is assumed to be true because conclusion is, once again, a part where the writers conclude their results of the studies. As an external consequence conjunction, "thus" shares the same percentage with internal concluding conjunction in methodology part. It is argued that the conjunction "thus" is supposed to be used mostly in the methodology part as an external consequence conjunction rather than as an internal concluding conjunction.

The major difference found between Indonesian and foreign journals on the use of "thus" lies on the way the writers present the ideas. The employment of internal conjunction in foreign journals signify that the foreign journals require their writers to integrate the ideas and arguments in the discourse. The conjunction is positioned as an important tool to organize the discourse. Seen from the concordance plot, the employment of "thus" in foreign journals is found a lot in the findings part. It signifies that the journals emphasize on the clarity of thought integrated in the discourse and regards findings and discussion part as the important part of a journal article. The writers of the journals present the ideas as textual meanings, referring to a means of staging or organizing text as a text (Raharjo & Nirmala, 2016).

The Indonesian journals analyzed in this paper involve external conjunction more than internal conjunction. It reveals that their writers present the ideas in a sequence. Moreover, the employment of "thus" is found in the introduction and findings and discussion part. The introduction actually is about the arguments of the writers why particular topic is chosen. Introduction part is a place to communicate the author's stance and the readers about particular topic. In other words introduction part is important to position the writers and persuade readers to accept claims (Miasari, Arsyad, & Arono, 2018). The sequence employed in that part signifies that the Indonesian journals require explicit conjunction and logical order to express the necessity of the paper.

4. Conclusion

Conjunction "thus" is used differently in Indonesian and foreign journal articles. Though both journals employ "thus" internally and externally in the texts, the frequency and plot of the use of conjunction differs significantly. Indonesian journal articles employ external conjunction more than internal conjunction. External conjunction "thus" is used externally to show consequence. Seen from the concordance plot, conjunction "thus" is used dominantly in the introduction part. On the other hand, foreign journals are dominated by internal conjunction which shows conclusion. The

employment of the conjunction is found in the findings and discussion parts. The different use of conjunction in both journals reveal that the cohesion of foreign journals is found more structured as the conjunction is used in findings and discussion part to show the researchers' conclusion after narrating the data. On the other hand, Indonesian journals only employ "thus" to show consequences in the introductory part to strengthens the arguments. This research suggests future researchers to compare other conjunctions in the two journals to complement the present findings.

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