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SYNTACTIC COMPLEXITY OF ONLINE OPINION ARTICLES PUBLISHED IN SOUTH EAST ASIAN COUNTRIES

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ABSTRACT

The research investigated the syntactic complexity of opinion articles published in online newspapers from English as a Second Language (ESL) and English as a Foreign Language (EFL) countries in South-East Asia (SEA). The aims of the research were, first, to analyze the types of Syntactic Complexity (SC) of opinion articles in online news media. The second was to seek the difference in syntactic complexity in online opinion articles between ESL and EFL countries. The third was to seek whether there was a significant difference in terms of types of syntactic measurements between ESL and EFL countries. To answer the questions, the research applied both quantitative and qualitative methods. Twelve opinion articles from online news media in SEA countries were derived from Malaysia and Singapore, which represented ESL countries, and Indonesia and Thailand, which represented EFL countries. The data were analyzed by using an L2 syntactic complexity analyzer. The Second Language Syntactic Complexity Analyzer (L2SCA) program displayed fourteen syntactic complexity measures divided into five types of measurements such as the length of production, sentence complexity, subordination, coordination, and particular structures. From comparing overall ESL and EFL countries and each of the opinion articles topics, the research results reveal that opinion articles of ESL countries show a higher score on the length of production, sentence complexity, subordination, and particular structures than EFL countries. Meanwhile, in coordination type, EFL countries display a higher number of a score than ESL ones. The research indicates there is no significant difference between ESL and EFL countries since the p-value of each type of syntactic complexity is higher than 0,05.

Keywords: *syntactic complexity, online opinion articles, published articles, d-analyzer*

INTRODUCTION

Opinion articles, as part of a newspaper's section, are short argumentative essays written by the readers of the newspapers or by the public society who wants to express their opinion on specific issues in writing. Since opinion articles are written in English by local writers, they contain various cultural background that affects the writer's style. These articles are written by different writers and published in different countries, so that these articles could vary in many aspects, such as the dictions and sentence structures. English has a different status in different South-East Asian (SEA) countries. English is a foreign language in Thailand, Vietnam, Laos, and Indonesia, as these countries do not have a history of colonization from English native countries such as the USA, UK, and Australia. While it is used as a second language in Malaysia, Singapore, and the Philippines, where English has become part of a country's main institutions and are former colonies of the USA and UK (Rajadurai, 2005).

Some works have been conducted to investigate opinion articles. Shen and Tao (2021) have compared the use of stance markers between two different genres; medical research articles and newspaper opinion articles. The results show that the occurrences

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of stance markers in newspaper opinion articles are higher than in medical research articles. Dewi (2019) has taken ten opinion articles about climate change from online newspapers published in the United States and discovered the types of illocutionary acts and how the writers apply persuasive strategies in their writings. Indarti (2018a) has examined the rhetorical moves of opinion articles published in The Jakarta Post and found a difference between native and non-native writers in terms of thesis statement; while native writers tend to use two or more complex sentences, non-native writers mostly use a single sentence. The mentioned studies discuss opinion articles only from the point of view of sentential moves. Al-Rickaby (2020) has compared the engagement markers and the use of stance between English and Arabic newspaper opinion articles and demonstrated that both English and Arabic opinion articles employed stance and engagement markers, while English online newspaper opinion articles employed more stance markers. Abu-Ayyash (2020) has used opinion articles on the topic of the United Kingdom Independent Party (UKIP) leader's call to ban the burqa in the UK published in the Guardian newspaper. It explores the use and function of cohesive devices that link the text to the context (exophora) and those that relate the text to the culture (homophora). Meanwhile, Oktavianti and Adnan (2020) have identified the verbs found in opinion articles published in The Jakarta Post and found that there are three most frequent verb types used; material, verbal, and feeling verb types.

The quality of a text can be measured by syntactic complexity. Syntactic Complexity (SC) is a branch of syntax that examines writing skills in terms of the diversion of words in a text (Lu, 2010). The measure of SC can be used to predict the quality of writings. The complexity of the learners' language can be identified by analyzing the variety of structures through syntactic complexity measurement (Lu, 2010). The Second Language Syntactic Complexity Analyzer (L2SCA) program can be used in some fields of discourse analysis to find out the relationship between words and sentences in a text. This program provides fourteen measures to gauge five types of syntactic complexity: length of production, sentence complexity, subordination, coordination, and particular structures. Despite differences in SC measurements, the development in syntactic complexity is an integral part of a second language learner's overall development in the target language from time to time (Lu, 2010). Development means the process of SC to be more deliberated in measuring the complexity of words and sentences from fourteen types of SC measurements, as seen in Table 1.

Some studies have been conducted in relation to syntactic complexity. Kuiken and Vedder (2019) have explored the syntactic complexity focused on the number of coordinate and subordinate structures of the argumentative essays of L2 learners and native writers of Dutch, Italian, and Spanish. Their research indicates the variation of syntactic complexity in different languages and proficiency levels. Khusik and Huhta (2020) have discussed the L2 syntactic complexity analyzer and coh-metrix to examine argumentative essays written by Pakistan and Finland students of different Common European Framework of Reference (CEFR) levels. They have found differences in the length of production units, subordination, and phrasal density. Casal and Lee (2019) have studied the connection between syntactic complexity and the writing quality of research papers written by first 280 first-year ESL students. The research reveals minor diversity in clausal subordination and coordination and a major difference in complex nominal densities, mean length of clauses, and mean length of T-unit. They argue that syntactic complexity indicates the quality of ESL composition writings.

Using traditional indices of syntactic complexity, fine-grained indices of casual complexity, and fine-grained indices of phrasal complexity to estimate writing complexity scores, the research conducted by Kyle and Crossley (2018), has indicated that writing quality could be predicted by fine-grained indices of phrasal complexity. Saricaoglu, Bilki, and Plakans (2021) have explored the relationship between syntactic complexity and rhetorical functions and the level of move realization in 79 introduction sections of research articles written by undergraduate L2 students. They find a higher level of phrasal complexity in the introduction with a higher level of move realization.

Meanwhile, Indarti (2018b) has investigated the syntactic complexity of online English newspaper editorials published in ten countries. It reveals that newspaper editorials from NS countries (USA and UK) indicate complexity at the beginning and intermediate levels of proficiency, while newspaper editorials published in Nigeria show the most complex sentence structure, which can be seen from the length of production.

Taking account of the definitions of SC, how it is measured, and some previous studies, it can be seen that SC can be used as a medium to see the variation of words and sentences used, especially in the writing production such as opinion articles. The D-Analyzer is a sophisticated and automated tool that can be used to measure syntactic complexity. Therefore, the present research measures the syntactic complexity using the D-Analyzer proposed by Lu (2010) to see the complexity of words and sentences of opinion articles published in some online news media between Malaysia and Singapore (ESL countries) and Indonesia and Thailand (EFL countries). Thus, the research seeks to find the answer: (1) What syntactic complexity types are found in online opinion articles published in some SEA countries?; (2) Are there any differences in SC types found in opinion articles published in ESL and EFL countries? The finding of the research is expected to contribute to the existing research on syntactic complexity in the professional genre area since Lu and Ai (2015) have said that the measure of syntactic complexity could be used to predict the quality of written production. The prediction of text

quality could be used by online newspaper opinion articles writers as the guidelines to produce acceptable writing products.

Table 1 Syntactic Complexity Measurements by Lu & Ai (2015)

Measurements	Code
Length of production unit	
Mean length of clause	MLC
Mean length of sentence	MLS
Mean length of T-unit	MLT
Amount of subordination	
Clauses per T-unit	C/T
Complex T-units per T-unit	CT/T
Dependent clauses per clause	DC/C
Dependent clauses per T-unit	DC/T
Amount of coordination	
Coordinate phrases per clause	CP/C
Coordinate phrases per T-unit	CP/T
T-units per sentence	T/S
Degree of phrasal sophistication	
Complex nominal per clause	CN/C
Complex nominal per T-unit	CN/T
Verb phrases per T-unit	VP/T
Overall sentence complexity	
Clauses per sentence	C/S

METHODS

To answer the questions, the research applies both quantitative and qualitative methods. Quantitative data are the outcome result in numerical data form from the calculation, which then being analyzed using words and sentences, while qualitative data are used to explain and explore the new phenomenon found in the calculation result of syntactic complexity between ESL and EFL countries. Data of the research are the selected opinion articles published in online newspapers in Malaysia, Singapore, Indonesia, and Thailand. The criteria for selecting the articles are; first, they are published between April to July 2018. Second, the opinion articles selected for analysis are those whose topics are found in all online news media being studied. Third, the length of the articles is between 800 to 1.300 words. Twelve online opinion articles are taken from four countries with three different topics. Each topic is written by different writers in different countries. Table 2 shows the opinion articles in ESL (Malaysia and Singapore) countries, while Table 3 shows the opinion articles in EFL (Indonesia and Thailand) countries.

Table 2 Opinion Articles of ESL Countries

Country	Title of Opinion Article
Malaysia	www.thestar.com.my
Topic 1	New era under world's oldest PM
Topic 2	Putting in place a new Malaysian order
Topic 3	Trade war – be ready to respond
Singapore	www.straitimes.com
Topic 1	A new dawn in Malaysia
Topic 2	How to start a revolution – a Malaysian primer
Topic 3	China draws closer to its neighbors

Table 3 Opinion Articles of EFL Countries

Country	Title of Opinion Article
Indonesia	www.thejakartapost.com
Topic 1	What Indonesia can learn from Malaysia's election
Topic 2	What next after Malaysia's reversal of fortune
Topic 3	Minimizing impacts of US-China trade war
Thailand	www.bangkokpost.com
Topic 1	Mahatir's win shows voting works
Topic 2	'New Malaysia' can be a catalyst for region
Topic 3	Casualties of the trade war

The data are converted into TXT files and saved into zip files before uploading them into D-analyzer online program via the link: http://www.personal.pspu.edu/xx113/downloads/l2sca/.html. The results are in numerical form and are analyzed and discussed using the theory of syntactic complexity proposed by Lu and Ai (2015). For the first research question, the researchers compare the results of each syntactic complexity type between ESL and EFL writers. Meanwhile, to answer the second research question, the researchers seek the comparison of the higher and the lower score of both types of syntactic complexity and the opinion articles' topics to reveal in what terms of syntactic complexity types that show the most significant difference of online newspaper editorials between ESL and EFL countries. Pearson's Chi-square in Statistical Package for Social Science (SPSS) employs to investigate if the difference is statistically significant from statistical data of syntactic complexity between ESL and EFL countries. The hypothesis are:

H0: The syntactic complexity used in ESL countries is not significantly different from that in EFL countries.
H1: The syntactic complexity used in ESL countries is significantly different from that in EFL countries.

If the p-value reported is equal to or less than 0,05 (at the 95% level of confidence), the null hypothesis (H0) is rejected. However, if the p-value reported is higher than 0,05 (at the 95% level of confidence), the null hypothesis (H0) is accepted.

RESULTS AND DISCUSSIONS

The syntactic complexity of the ESL and EFL are determined by using the Syntactic Complexity Analyzer. This analyzer contains twenty-three types, which are divided into nine types of Syntactic Structural Unit (SSU) and fourteen types of syntactic complexity. The first-nine types of SSU are a general overview of calculation based on the number of sentences and words structures units such as words (W) - a unit of language, sentence (S) - a set of words, verb phrases (VP) - words tied to a verb, clauses (C) - a group of words, T-units (T) - a dominant clause, dependent clauses (DC) contain subject and verb but not express a complete idea, complex T-units (CT) - a production unit with a sentence, coordinate phrases (CP) consists of two or more syntactically unit, and complex nominal (CN) consists of a determiner before a noun. The result of nine types of SSU can be seen in Table 4.

Table 4 Syntactic Structural Unit (SSU) of ESL and EFL of South-East Asian Countries

No.	SSU Types	ESL	EFL	Score
1.	W	7.711	5.682	13.393
		58%	*42%*	*100%*
2.	S	303	265	568
		53%	*47%*	*100%*
3.	VP	867	638	1.505
		58%	*42%*	*100%*
4.	C	630	482	1.112
		57%	*43%*	*100%*
5.	T	346	301	647
		53%	*47%*	*100%*
6.	DC	252	147	426
		59%	*41%*	*100%*
7.	CT	187	141	328
		57%	*43%*	*100%*
8.	CP	184	160	344
		53%	*47%*	*100%*
9.	CN	983	743	1.726
		57%	*43%*	*100%*

From Table 4, in the first syntactic structural unit of the number of words can be seen the details of each term of words. The ESL opinion articles contain more words (7.711 words or 58%) compared to EFL opinion articles. From the total number of sentences produced, ESL countries produce a higher number of sentences with 303 (53%) sentences than EFL countries (265 or 47%). Second, from the verb phrase production, ESL countries produce a higher number with 867 (58%) than EFL countries (638 or 42%).

The same result is found in the production of clauses where ESL countries produce a higher number of total 630 or 57% than EFL countries (482 or 43%). Next, from the calculation of T-units production, Table 4 shows that ESL countries display a higher number of T-units with 346 (53%) than EFL countries (301 or 47%). Then, the finding of Dependent Clauses (DC) is that ESL countries have a higher number of DC with a total of 252 (59%) than EFL countries (174 of 41%). Moreover, from the total number of complex T-units (CT), ESL countries have a higher number of total 187 (57%) than EFL countries (141 or 43%). In the next result of total coordinate phrase (CP), ESL countries have a higher number of CP with 184 (53%) than EFL countries (160 or 47%). Last, from the total number of complex nominal (CN), ESL countries have a higher number of CN with a total of 983 (57%) than ESL countries (743 or 43%). In short, ESL countries get higher numbers of scores in all SSU units than ESL countries. In the calculation percentage, ESL countries have more than 50% of scores than EFL countries in all units. Therefore, it can be concluded that ESL countries have a greater number and display more scores of total unit production than EFL countries.

After finding the result of each SSU unit, fourteen types of syntactic complexity are the next calculation result which can be found in the syntactic complexity analyzer. Table 5 presents the result of the overall syntactic complexity of opinion articles between ESL and EFL countries. There are five types of syntactic complexity which are divided into (i) three sub-types of the length of production, (ii) one sub-type of sentence complexity, (iii) four sub-types of subordination, (iv) three sub-types of coordination, and (v) three sub-types of sentence structures. The overall result of fourteen sub-types of syntactic complexity is presented in Table 5.

Table 5 The Overall Results of Syntactic Complexity of ESL and EFL of South-East Asian Countries

Sub Types	ESL	EFL	Total
Length of production			
MLS	151,25	130,32	281,58
	54%	46%	100%
MLT	131,97	114,54	246,51
	54%	46%	100%
MLC	72,52	71,12	143,64
	53%	47%	100%
Total	**355,75**	**315,97**	**671,72**
	53%	**47%**	**100%**
Sentence of complexity			
	12,63	11,07	23,70
	53%	47%	100%
Subordination			
C/T	10,92	9,70	20,61
	53%	47%	100%
CT/T	3,23	2,87	6,10
	53%	47%	100%

Table 5 The Overall Results of Syntactic Complexity of ESL and EFL of South-East Asian Countries (Continued)

Sub Types	ESL	EFL	Total
DC/C	2,37	2,18	4,55
	52%	48%	100%
DC/T	4,36	3,54	7,90
	55%	45%	100%
Total	**20,88**	**18,28**	**39,16**
	53%	**47%**	
Coordination			
CP/T	3,16	3,21	6,37
	50%	40%	100%
CP/C	1,79	1,99	2,78
	47%	53%	100%
T/S	6,94	6,84	13,78
	50%	50%	100%
Total	**11,89**	**12,05**	**23,94**
	50%	**50%**	
Particular structures			
VP/T	14,88	12,90	27,78
	54%	46%	100%
CN/T	16,80	15,09	31,89
	53%	47%	100%
CN/C	9,23	9,35	18,58
	50%	50%	100%
Total	**40,92**	**37,34**	**78,26**
	52%	**48%**	

L2 Syntactic Complexity Analyzer provides fourteen measures gauge on one of the following five dimensions of syntactic complexity. The first type consists of three measures that gauge the length of production at the clausal, sentential, or T-unit level, namely, mean of clause (MLC), mean length of sentence (MLS), and mean length of T-unit (MLT). The second type consists of a sentence complexity ratio (clauses per sentence or C/S). The third type comprises four ratios that reflect the amount of subordination, including a T-unit complexity ratio (clauses per T-unit, or C/T), a complex T-unit ratio (complex T-units per T-unit, or CT/T), a dependent clause ratio (dependent clauses per clause, or DC/C), and dependent clauses per T-unit (DC/T). The fourth type is made up of three ratios that measure the amount of coordination, namely, coordinate phrases per clause (CP/C), coordinate phrases per T-unit (CP/T), and a sentence coordination ratio (T-units per sentence, or T/S). The fifth and final type consists of three ratios that consider the relationship between particular syntactic structures and larger production units, i.e., complex nominals per clause (CN/C), complex nominals per T-unit (CN/T), and verb phrases per T-unit (VP/T).

In the first type of length of the production unit, from the total score of 671,72, ESL countries display a higher number with a total of 355,75 (53%) than EFL countries (315,97 or 47%). As mentioned, length of production consists of Length of Sentence (MLS), Mean Length of T-units (MLT), and Mean Length of Clause (MLC). From these three categories, ESL countries get higher numbers in all sub-types of syntactic complexity. In the first sub-type of MLS, with a total score is 281,58, opinion articles of ESL countries get a higher number with 151,26 (54%) than EFL countries (130,32 or 46%). It means that the long sentences are displayed more in ESL than in EFL countries (Hunt, 1970, in Ai & Lu, 2013). This shows that ESL online opinion articles contain long sentences while EFL online opinion articles contain rather short sentences. In the second type of MLT, from a total score of 246,50, the opinion articles of ESL countries get a higher number of sub-types of syntactic complexity with 131,96 (54%) than EFL countries with 114,54 (46%). It means that the main clause and any dependent clause of non-casual structures are displayed more in ESL than in EFL countries (Hunt, 1970, in Ai & Lu, 2013). This shows that ESL online opinion articles have more dependent clauses than EFL online opinion articles. Next, in the third type of MLC, from the total score of 143,63, the opinion articles of ESL countries display a higher number with 72,52 (50%) than EFL countries with 71,10 (50%). Seeing from the percentage score of MLC, both ESL and EFL get the same percentages. It means that a subject or finite verb is displayed more in ESL countries than in EFL countries (Hunt, 1970, as cited in Ai & Lu, 2013). From this first type of syntactic complexity, it can be concluded that ESL countries dominate the overall length of production in syntactic complexity of opinion articles in SEA countries. ESL countries display a greater number of lengths of production than EFL countries. It means that more variations of words and sentences can be found in ESL countries than in EFL countries.

The second type of syntactic complexity is the amount of sentence complexity consisting of Clauses per Sentence (C/S). Table 5 shows that the total score of C/S is 23,70. Seeing from the English country's status, opinion articles of ESL countries have a higher number of types of syntactic complexity with 12,62 (53%) than EFL countries (11,07 or 47%). It means that in the opinion articles of SEA countries, ESL countries produce a higher number of less complex sentences than EFL countries.

Next, the third type of syntactic complexity is subordination, which consists of Clauses per T-unit (C/T), Complex T-units per T-unit (CT/T), Dependent clauses per clause (DC/C), and Dependent Clauses per T-unit (DC/T). Table 5 shows that the total score of subordination is 39,16. Seeing the total number of scores, opinion articles of ESL countries produce a higher number of subordinations with a total of 20,88 (53%) than EFL countries (18,28 or 47%). Seeing the details of each sub-type of subordination, in the first sub-type of C/T, from the total score of 20,61, the opinion articles of ESL countries display a higher

score of 10,92 (53%) than EFL countries (9,69 or 47%). It means that complex clauses are displayed more in ESL countries than in EFL countries (Hunt, 1970, as cited from Ai & Lu, 2013). In the second type of CT/T, from a total score of 6,10, the opinion articles of ESL countries also produce a higher number of T-units with a total of 3,23 (52%) than EFL countries (2,86 or 48%). In the third subtype of DC/C, from a total score of 4,55, ESL countries have a higher score of DC/C with 2,37 (52%) than EFL countries (2,17 or 48%). It means that the number of dependent clauses is displayed more in the ESL countries rather than in the EFL countries (Hunt as cited in Ai & Lu, 2013). The fourth type of DC/T that also appears in Table 4, from the total score of 7,89, the opinion articles of ESL countries have a higher number with 4,35 (55%) than EFL countries (3,54 or 45%). The number of dependent clauses of the T-unit is displayed more in the ESL countries rather than in the EFL countries (Hunt as cited in Ai & Lu, 2013). From this third type of subordination, ESL countries dominate the greatest number of subordinations of syntactic complexity than ESL countries. It means that the opinion articles of ELS countries produce a higher number of subordinations than EFL countries.

The fourth type of syntactic complexity is called coordination. As mentioned, this type consists of three sub-types such as Coordinate Phrases per Clause (CP/C), Coordinate Phrases per T-unit (CP/T), and T-units per Sentence (T/S). In the first CP/C type of coordination, Table 5 shows that the total coordination number is 23,94. From the total English status countries score, both ESL and EFL opinion articles get the same percentage of coordination calculation at 50%. The total number that they got is not slightly different. ESL countries get a lower score of 11,89 than EFL countries (12,05). Through each type of coordination, from the first type of CP/T in Table 5, with a total score of 6,36, the opinion articles of ESL countries display a lower number of the score with 3,16 (50%) than EFL countries (6,36 or 50%). It means that ESL countries contain the least number of coordinate phrases per T-unit thane EFL countries. The second type of CP/C is also reflected in Table 5 with a total score of 3,78; the opinion articles of ESL countries produce a lower number of CP/T with a total of 1,78 (47%) than EFL countries (1,99 or 53%). It means that ESL countries produce a smaller number of clauses of T-unit than EFL countries. The third sub-type of T/S in Table 5 shows that from the total score of 13,78, the opinion articles of ESL countries display a small higher number of T/S with 6,94 (50%) than EFL countries with 6,84 (50%). It means that ESL countries produce a greater number of coordinated sentences than EFL countries. From the coordination type of syntactic complexity, it can be seen that both EFL and ESL countries get the same number percentages in the higher number of two types; CP/C and T/S with 50%, while in the CP/C, ESL countries get a lower number of scores in T/S sub-type than EFL countries.

The last type of syntactic complexity is particular structures which consist of Complex Nominal per Clause (CN/C), Complex Nominals per T-unit (CN/T), and Verb Phrase per T-unit (VP/T). Table 5 shows that the total score of sentence structures is 78,26. From this total score, ESL countries have a higher number of the score, with a total of 40,92 or 52%, than EFL countries (37,34 or 48%). In the third sub-topic of CN/C, both ESL and EFL countries get the same percentage number of 50%. However, the score of CN/C is not slightly different from 9,23 for ESL countries and 9,35 for EFL countries. It means that ESL countries display a smaller number of complex nominals per clause than EFL countries. In the second sub-type of CN/T, the opinion articles of ESL countries got a higher number with 16,80 (53%) than EFL countries (15,08 or 47%). It means that ESL countries display more complex nominal per clause than EFL countries. In the last sub-type of VP/T of particular structures, Table 5 shows that from the total score of 27,78, the opinion articles of ESL countries display a higher number of particular structures with a total of 14,88 (54%) than EFL countries (12,89 or 46%). It means that ESL countries display a greater number of verb phrases per T-unit than EFL countries. From this particular sentence type, it can be concluded that the score is not slightly different between ESL and EFL countries, but, in terms of the number of total calculations and percentage, ESL countries have a higher score than EFL countries.

From the overall result, explanation and comparison of opinion articles displayed in Table 5 show ESL countries have a higher number of syntactic complexities in four syntactic complexity measurements of the length of production, sentence complexity, subordination, and particular structures. It means that ESL countries display a greater number of length of production at the clausal, sentential, or T-unit level, sentence complexity ratio, amount of subordination, and particular structures in relation to larger production units (Ai & Lu, 2015). One interesting finding is that both ESL and EFL countries get the same percentages in the coordination type of measurement with a total of 50%. Based on the calculation done by the L2SCA program, the results of the scores show slight differences in the percentage (ranging between 45% to 55%). It can be generalized that ESL is much better than EFL professional writers.

Table 6 shows the quantitative calculation of differences between ESL and EFL countries. It can be seen that all Chi-square scores are higher than the p-value of 0,05. First, the length of production has a 0,287 Chi-score. Second, sentence complexity displays a 0,157 Chi-square score. In the third type of syntactic complexity, subordination has a 0,321 Chi-square calculation result. Next, in the coordination result, the score of Chi-square is 0,287. Last, in particular structures, the Chi-square score of the last syntactic complexity type is 0,306. Therefore, it can be concluded that there are just slight differences between ESL and EFL countries in terms of syntactic complexity.

Table 6 The Differences of ESL and EFL Syntactical Complexity Using Chi-square

Syntactical Complexity	Chi-Square Type
Length of production	0,287
Sentence complexity	0,157
Subordination	0,321
Coordination	0,287
Particular structures	0,306

For the first type, length of the production unit, ESL countries contain the number of length of the production of clausal, sentential, and T-unit than EFL countries. Lu and Ai (2015) have stated that a longer length of production has been found to correlate with a higher level of proficiency. It can be inferred that the online opinion articles of ESL countries in SEA countries have a high level of syntactic complexity than in EFL countries. It means that ESL opinion articles display more variation of patterns compared to EFL opinion articles because the length of the production unit described the clausal, sentential, and T-unit. In this case, ESL countries display more complexity in the syntactic pattern. The second type of syntactic complexity measurement compromises a sentence's phrasal and overall complexity ratio. The result of the research is in line with previous research conducted by Lu and Ai (2015) in correlation with the comparison of ESL and EFL countries, where EFL produces a lower sentence complexity ratio than ESL countries. The third type of syntactic complexity measurement counts the four ratios that reflect the amount of subordination such as clauses per T-unit, complex T-unit per T-unit, dependent clause per clause and dependent clauses per T-unit. ESL countries gain a higher score of subordination than EFL countries. The result of the research confirms previous research conducted by Lu and Ai (2015) in correlation with the comparison of ESL and EFL countries, where EFL produces a lower sentence complexity ratio than ESL countries. The fourth type of syntactic complexity is coordination which includes three ratios that measure the amount of coordination such as coordinate phrases per clause, coordinate phrases per T-unit, and a sentence coordination ratio. The low score of coordination is seen as a good point because the less use of coordination indicates an advanced level of proficiency, while the greater use of coordination reflects a basic level of English proficiency (Bardovi-Harlig, 1992). The last type of syntactic complexity of particular structures consists of three ratios, i.e., complex nominal per clause, complex nominal per T-unit, and verb phrases per T-unit (Lu, 2010). The result of the research confirms the previous research conducted by Lu and Ai (2015) in correlation with the comparison of ESL and EFL countries, where EFL produces lower particular structures than ESL countries.

The results of the Chi-square show that there is no significant difference between ESL and EFL countries with $p > 0,05$, which means the null hypothesis is accepted. There are some factors that made a significant difference that is accepted. One of the factors is that each of the texts in both ESL and EFL opinion articles contains around 800 to 1.200 the number of words. This means that both ESL and EFL countries are relatively close in terms of the number of words. Another factor is that this research uses the same topic written by both ESL and EFL countries, so it influences the usage of the lexical, syntactical, and grammatical structure of the sentences in the opinion articles. The same topics written by different writers might have the same registers, terms, and vocabularies. The last factor that could be considered is that the research does not compare native and non-native writers, which might show a significant difference, as Lu (2010) proved in her research. The research uses the data from non-native countries, divided into ESL and EFL countries, where English is not the main language, but English is considered either a second or foreign language.

CONCLUSIONS

The research has revealed the syntactic complexity of twelve opinion articles published in South-East Asia countries such as Malaysia and Singapore as ESL countries and Indonesia and Thailand as EFL countries. The findings indicate that the general score of the five types of syntactic complexity of length of production, sentence complexity, subordination, coordination, and particular structures of ESL countries is higher than the EFL countries. It can be concluded that opinion articles of online news media published in ESL countries have a higher level of English proficiency, while opinion articles published in EFL countries have a lower level of English proficiency. In general, opinion articles published in both ESL and EFL countries display an advanced level of English proficiency, but ESL countries are more varied and more complex compared to EFL countries. Opinion articles of ESL countries display more variation in the pattern of complexity compared to EFL countries.

The research has also found that there is no significant difference in terms of the Chi-square score of the length production unit, sentence complexity, subordination, and particular structures based on the topics; it can be seen that the score of the p-value is higher than 0,05. Research on online media offers enormous topics to be explored in the linguistic field because the language will always develop and be dynamic. Further linguistics research could use other sections and genres of online media writing, such as the letter to the editor, editorial, features writings, and many more. Besides the D-analyzer of syntactic complexity topic, the researcher could investigate the lexical richness, grammatical complexity or other interesting linguistics topics to explore the writing production of online news media. Research

in syntactic complexity is recommended because it shows a variety of written production levels, especially from across countries. The research uses a small set of data. It leaves the gap to be filled in future research to use the bigger and wider scope of data from the number of articles or the countries as an object of the research, using another type of syntactic complexity measurements. It is of interest in future research to compare native and non-native countries since there is no research has been conducted in a professional genre of writing such as articles in online news media.

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