

Challenges in the Use of Logical Connectors for EFL Learners: Frequency, Variety, Suitability, and Improper Use with Pedagogical Implications

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ABSTRACT

Achieving effective and efficient writing requires grammar by using the right words and phrases and categorically achieving coherence and continuity in paragraphs. It, therefore, presents a challenge for EFL learners to learn the language in a position where a very limited function is served. The use of connectors, as found empirically in English studies, has been an unresolved issue faced by students writing in English as a foreign language. Henceforth, this research paper aims to investigate the existence of logical connectors that have been a primary obstacle to learners learning the ability to write in an EFL context. The paper explores the frequency, variety, suitability, and improper use of these connectors, as well as the affective factors that contribute to their misuse or overuse. Furthermore, the article provides pedagogical implications for writing instruction, including the use of genre-based approaches, semantic and syntactic recognition, and natural semantic metalanguage (NSM). The study contributes to a deeper understanding of the challenges faced by EFL learners in mastering the use of logical connectors in written English and offers practical guidance for teachers seeking to improve their students' writing skills.

Keywords: Logical Connectors, Efl Writing, English Language Teaching

INTRODUCTION

In the teaching and learning process of the English language, writing has always been of utmost importance (Syarifudin, 2020; Ahmad, Mahmood and Siddique, 2019; Süğümlü, Mutlu and Çinpolat, 2019; Ardin, 2017; Mohammad and Hazarika, 2016). The mandate for English language instruction, especially as a foreign language has been prominent and reinforced all over the world (Taheri et al. 2020) as English becomes the world's most important and widely used language (Setyaningrum and Fatmawaty, 2020; Bahaziq, 2020; Indari and Barus, 2019). Nonetheless, it has played a great role in the world of academe in such EFL countries like Iran (Taheri et al. 2020), Indonesia (Bahaziq, 2020), Thailand (Thongchalerm and Jarunthawatchi, 2020), and India (Chatterjee, 2016) to name a few. Hence, whether written or spoken, English is perceived as the language of global communication today (Bahaziq, 2020).

Writing requires strategic use of language with communicative potential and structural correctness (Ahmad, Mahmood, and Siddique, 2019). Nevertheless, of the four macro skills in language learning, writing has been found to be the most difficult, complicated (Archila, Molina, and de Mejia, 2020; Ardin, 2017; Watcharapunyawong and Usaha, 2012),

most painstaking (Derakhshan and Shirejini, 2020; Mohammad and Hazarika, 2016) and challenging (Khatter, 2019; Mohammad and Hazarika, 2016) language skill for EFL learners to acquire, develop, and master. Not only it is difficult to learn but it has been perceived as the most difficult to teach as well (Ardin, 2017; Watcharapunyawong and Usaha, 2012). It requires greater effort from both the teachers and learners to produce an outcome (Zurniati, 2018; Yanti and Basthomi, 2019) that constitutes effective language learning (Süğümlü, Mutlu, and Çinpolat, 2019), as it is through writing that a learner's progress and academic development can be grasped (Mohammad and Hazarika, 2016). There is no question that it is considered a learning tool in the field of language that helps students in expanding and sharing their ideas and opinions, creating and controlling information, and tracking their use of language (Ardin, 2017; Mohammad and Hazarika, 2016; Wang, 2013).

As a complex task (Sabti et al. 2019), for good writing to be accomplished, one needs to learn how to write grammatically correct words, sentences, paragraphs and texts (Fitria, 2020). It is troublesome in the EFL context if learners may not have adequate language abilities at their disposal, making them ineffective writers (Sabti et al. 2019).

Common Problems that Arise in an EFL Context

The language production errors of learners are normal and even unavoidable in the process of English language learning (Wang, 2013). That is why, since the last century, the use of the native language (L1) in the sense of English as a Foreign Language (EFL) has evoked various opinions (Boustani, 2019). Taheri et al. (2020) quoted Strakova (2013), who argued that learning a foreign language as a cognitive process is distinguished by characteristics that enable learners to make a great deal of effort. Derakhshan and Shirejini (2020) have also endorsed this notion, further explaining that learning and teaching English as a foreign language are often painstaking tasks, especially when they come to places where English serves a very limited purpose.

Because of the lack of vocabulary in the repertoire of the writers and the handicap in their grammatical knowledge of the English language (Sabti et al. 2019), such root problems hinder learning the language skills needed, let alone the ability to write. Ironically, reviewed literature shows that writing has gained great prominence in the field of research and yet Derakhshan and Shirejini (2020) have further positioned that despite this, there is a neglect to improve the skills in the educational process in addition to its demanding existence.

Furthermore, Yanti and Basthomi (2019) mentioned in their study the problems faced by students in writing English as a Foreign Language, specifically the use of connectors. They cited Trebits (2009) who claimed that non-native speakers of English find it difficult of a task to form cohesive academic texts because interference from mother tongue overwhelms the use of rhetorical selections for their writing (Yanti and Basthomi, 2019). This notion has also been supported by the claims of Septiana (2020) and Boustani (2019).

Logical Connectors in EFL Writing.

Years of study on English writing have established logical connectors as an impediment to mastering the skill (Ha, 2014). In the same study by Ha (2014), ESL and EFL teachers have revealed that logical connectors are either misused or overused by their students.

Yanti and Basthomi (2019) further cited Gazzar (2006) who found that students' writing demonstrates weak cohesion due to the lack and inappropriate use of connectors, long distance between cohesive relations in a structure, and uncertain opinions that led to several interpretations. Nopita (2011) explained that constructing coherent ideas and using coherent devices are two interrelated aspects that have to be taken into account in any kind of writing. This has also been further expounded by Adiantika (2015) that students should be stimulated to ensure that their text goes through a set of sentences. Therefore, directing them to the concepts they want to deliver, as well as the phrases they use to express, is important (Holloway, 1981, as quoted in Adiantika 2015).

It is for these purposes that this research has been carried out. The paper seeks to examine the nature of logical connectors, which is a strong impediment for learners to explicitly improve their ability to write in an EFL environment. In addition, the analysis narrowed the frequency, range, suit-

ability and improper use of logical connectors, the affective factors behind this, and its pedagogical implications in the teaching and learning process of the EFL.

Based on the above analysis, the research problem, aims and goals of the present study will be formulated as follows.

Research Problem. Writing is a crucial skill in the teaching and learning process of the English language, particularly in the EFL context. However, writing is found to be the most difficult, complicated, and challenging language skill for EFL learners to acquire, develop, and master. Learners face common problems such as language production errors, lack of vocabulary, and grammatical knowledge, which hinder their ability to write.

Research Aim. The present study aims to investigate the use of logical connectors in EFL writing and to identify the common errors and difficulties that learners face in using them effectively.

Research Goals. The research goals of this study are quite varied but complementary, and they are presented as follows.

- (1) To identify the common errors and difficulties that learners face in using logical connectors in EFL writing.
- (3) To explore the relationship between learners' proficiency levels and their use of logical connectors in EFL writing.
- (4) To investigate the effectiveness of different teaching methods in improving learners' use of logical connectors in EFL writing.
- (5) To provide recommendations for teachers on how to teach and help learners master the use of logical connectors in EFL writing.

MATERIALS AND METHODS

Search and Information Sources

The keywords Logical connectors (167), EFL writing (6,348), Writing Preposition (206), Writing Conjunctions (1,545), and Writing transitional devices (19) have been used to retrieve eight thousand and two hundred ninety-five (8,295) papers from open-access research portals such as Mendeley, MDPI, ScienceDirect, Taylor&Francis, and Routledge. In order to ensure the consistency and validity of the findings, only those papers published in the 10-year period (2010-2020) were included in these articles.

Following this, the author set a tougher criterion, explicitly its abstracts, methodology, and results were re-evaluated in literature from the past ten years. Studies to be checked must be about writing in an EFL environment and must be able to help research inquiries 1) the nature of logical connectors, 2) the frequency, variety and usage of logical connectors in EFL writing, 3) factors influencing the use of logical connectors in EFL writing, and 4) the pedagogical consequences of logical connectors in EFL setting. Papers that the author deemed necessary, following the criteria, were selected.

In addition, the book by Celce-Murcia and Larsen-Freeman, *The Grammar Book*, was of great use in the conduct of the analysis. This serves as the backbone and a reference for exploring the subject of research.

Data Collection Process

The data collection process was conducted via the method of meta-synthesis. A total of 32 papers have gone through a systematic process of synthesizing, cross-referencing, and interpreting from the 8,295 papers accessed on various research portals.

Findings and reviews of these selected articles were incorporated and represented in a manner that answers the research questions. Figure 1 shows the process of the systematic review carried upon the study.

Data processing and Thematic Analysis

The researcher used the thematic analysis approach to process the collected data. Data were systematically presented to obtain concise results, including the identification, examination, organization, and explanation of the themes contained in the literature data. Figure 2 shows the processing of data using thematic analysis in order to explore writing in an EFL context.

In order to extract common trends and patterns, studies on the writing parameters of EFL countries like China, Chinese Taiwan, Japan, Korea, India, Jordan, Kurdistan, and Spain have been checked and analyzed. To find overarching data, the results were analyzed and measured. Data that the author considered important in answering a particular research question were coded after rigorous assessment. The next step includes gathering the codes and developing initial themes.

Initial themes are examined and cross-referenced further. The next step includes refining and redefining which themes are classified using a matrix and represented. From the initial themes, common patterns and broader trends were elicited. The final stage includes the contextualization of the thematic data concerning the current literature.

RESULTS AND DISCUSSION

Understanding Logical Connectors: Types and Functions

Celce-Murcia and Larsen-Freeman (1999), in *The Grammar Book*, defined logical connectors as types of cohesive devices or lexical expressions that can add propositional content and specify the relationships between sentences, whether written or oral, to make sense of the text.

In the book, adverbial expressions which serve similarly to coordinating conjunctions are called logical connectors, which include 1) subordinating conjunctions or adverbial subordinators and 2) conjunctive adverbials.

Adverbial coordinators function to subordinate one clause to another and can be simple and complex as shown in Figures 3 and 4 (pages 520 and 521).

In addition, the authors (Celce-Murcia and Larsen-Freeman, 1999) cited Thompson and Longacre (1985), who argue that all languages seem to have some way of using clauses to modify other clauses in a manner compatible with English adverbial clauses. In such cases, adverbial subordinators can be classified as seen in Figure 5.

Conjunctive adverbials, on the other hand, are adverbials that do not subordinate a clause but connect independent clauses (see Figure 6, p.529).

For this type of logical connector, Celce-Murcia and Larsen-Freeman (1999) referred to Halliday and Hasan (1976) who categorized the connectors as *additives*, *adversatives*, *causal*, and *sequential* as shown in Figure 7, p.530.

Additive refers to certain connectors that help add new knowledge, *adversative* is used in two opposing ideas, *causal* introduces causes and inferences, and *sequential* is for re-

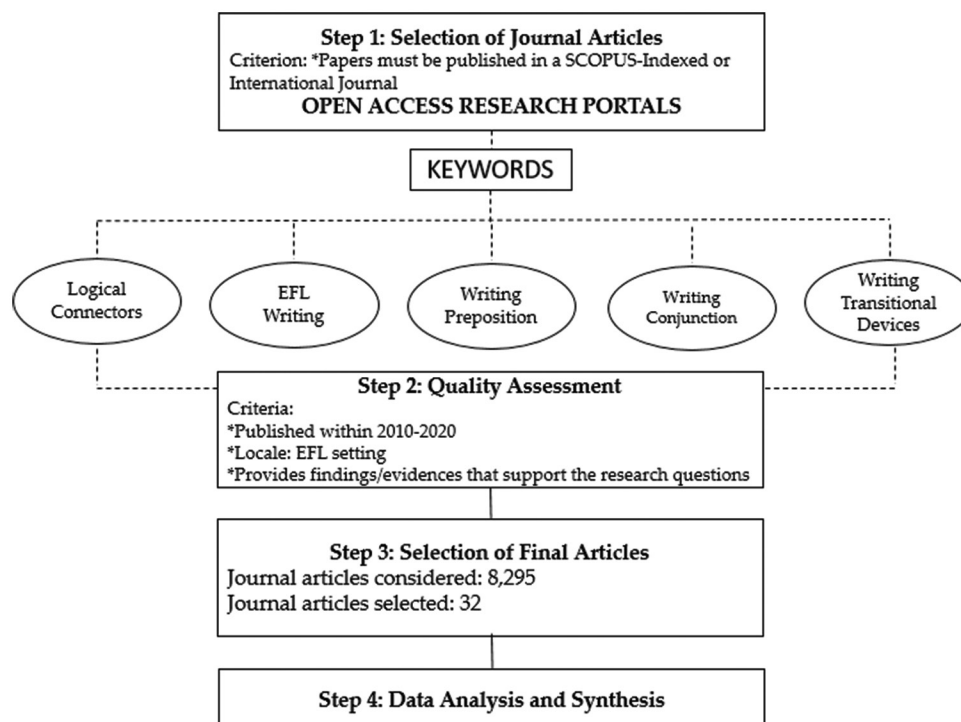


Figure 1. The Flow Diagram for Systematic Review

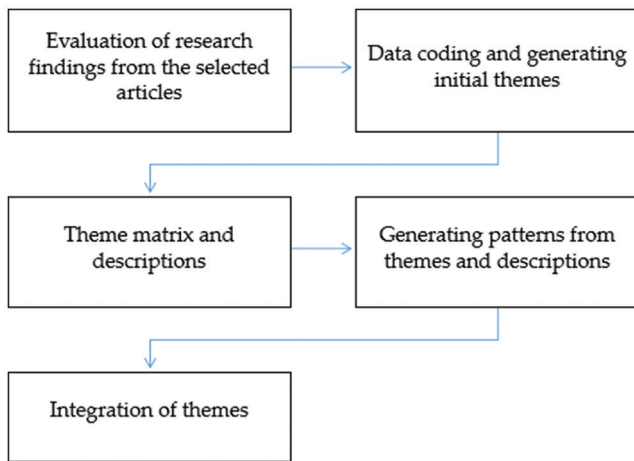


Figure 2. Flow diagram of the thematic analysis and meta-synthesis of the study

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Simple Adverbial Subordinators
 A list of simple adverbial subordinators or subordinating conjunctions includes the following:

after	lest	when(ever)
although	once	where(ver)
as	since	whereas
because	though	while
before	until	
if	unless	

We should point out immediately that many of the words listed above also fit other parts-of-speech categories, in which they would not be called adverbial subordinators. You have seen how *where* and *when*, for instance, function as *wh*-question words (Chapter 13). As you will see later, they also function as markers of relative clauses (see Chapter 29).

One test for whether or not a form is serving as an adverbial subordinator is to move the clause into different positions in the sentence, for adverbials typically can occupy clause-final, initial, and medial positions.

final: A whole crowd came out to see him *when he arrived*.
 initial: *When he arrived*, a whole crowd came out to see him.
 medial: A whole crowd came out, *when he arrived*, to see him.

Adverbial subordinators double in other contexts as prepositions in prepositional phrases:

adv sub: *Before/After the play ended*, many patrons were crying.
 Prep: *Before/After the play*, we had coffee.

adv sub: *Since the day you talked to me about it*, I've become convinced.
 Prep: *Since Monday*, it has been terribly hot.

adv sub: *Until it cools off*, I am not doing any yardwork.
 Prep: We will not have our next class *until the end of the week*.

Notice that what distinguishes these uses is what comes after the adv sub or Prep. If it is an adv sub, it will be followed by a clause; as a Prep, it is followed by an NP.²

Figure 3. Simple Type of Adverbial Subordinators According to Celce-Murcia and Larsen-Freeman

al-time or chronological order (Kurniawan, Dallyono, and Cahyowati, 2019).

EFL Problems with Logical Connectors According to Celce-murcia & Larsen Freeman

EFL students have sometimes been perceived to have trouble deciding which connector conveys the intended relationship between phrases. For reasons such as lack of vocabulary, there is no underuse of connectors, but students also misuse or overuse them in their written outputs.

Two reasons were presented by the authors (Celce-Murcia and Larsen-Freeman, 1999) which explain the misusing and overusing of logical connectors: different registers, and misplacement. Conjunctive adverbials, which are not permissible in writing, occur in highly formal registers or

Complex Adverbial Subordinators
 We will add to the list of expressions certain other fixed lexicalized units that also follow the pattern of preceding a subordinate clause, where the combination of [complex adverbial subordinator + clause] is able to appear in various positions in the sentence—before, after, and occasionally in the middle of, the main clause:

so/as long as	inasmuch as	in that
as soon as	in case (that)	now that
even if	in order that	provided that
even though	insofar as	so that
given that		

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final: You can stay with us *as long as you bring your own bedding*.
 initial: *As long as you bring your own bedding*, you can stay with us.

final: Bring an umbrella *in case it rains*.
 initial: *In case it rains*, bring an umbrella.

Figure 4. The Complex Type of Adverbial Subordinators According to Celce-Murcia and Larsen-Freeman

Time: *after, as long as, as soon as, before, since, when, whenever, until*
 Location: *where, wherever*
 Manner: *as (e.g., Do that as your brother does it), in that*
 Purpose: *so that, in order that*
 Reason: *since, because, as (e.g., He left, as it was late.), inasmuch as, now that*
 Circumstantial: —
 Simultaneous: *while (e.g., While she sang, he played.), as (e.g., As I was leaving, I saw her.)*
 Conditional: *if, even if, as long as, in case, provided that*
 Concessive: *although, even though, though, while*
 Substitutive: —
 Additive: —
 Absolutive: —

Figure 5. Adverbial Subordinators

styles of expression. The location of these connectors has something to do with another usage problem. Therefore, it is important to stress that if they repeat and link facts that are already presented in the text, logical connectors are not useful. Learners, as authors, need to know when and when not to use them in order to be accurate.

Frequency, Variety, Suitability, and Improper Use of Logical Connectors in EFL Writing

Ha (2014) examines 30 logical connectors in the essay writing of Korean university students and the analysis revealed that Korean EFL learners have a tendency to overuse additive logical connectors such as *moreover* and *furthermore*, chronological connectors such as *finally* and *secondly*, and underuse contrastive connectors such as *yet* and *instead*, and *then* as an inferential connector.

Asassfeh, Alshaboul and Alshboul (2013) cited Meisuo (2000) who examined cohesive features in 107 expository essays of Chinese undergraduates and the findings showed that Chinese EFL learners misuse adversative connectors like *but, however, and on the other hand*. In the same study by Asassfeh, Alshaboul, and Alshboul (2013), Ying (2009) asserted that Japanese and Chinese students often used *but* as a substitute for *however*. The results of the study by Chen (2006) showed misuse of adverbials like *besides* and *plus*. Hinkel (2001) also discovered that Arab learners' English writing is marked by the overuse of coordinating conjunctions *and* and *but* (Asassfeh, Alshaboul, and Alshboul 2013).

Moreover, a study by Asassfeh, Alshaboul, and Alshboul (2012) zeroes in on the distribution and suitability of logi-

CONJUNCTIVE ADVERBIALS
 Conjunctive adverbials, unlike adverbial subordinators, are complete adverbials unto themselves. They do not subordinate a clause; rather, they connect independent clauses.
 Sam should leave; *however*, Larry will object.

The inventory of English conjunctive adverbials is considerably larger than that of adverbial subordinators. A fairly complete list is given below. Some are individual words, and some qualify as lexicalized units:

additionally	furthermore	likewise
after all	however	moreover
also	in addition	nevertheless
alternatively	in any case/event	on the contrary
as a result	indeed	on the other hand
in contrast	in fact	otherwise
consequently	in other words	rather
conversely	in particular	similarly
despite that	in spite of that	still
first . . . second . . . finally	in sum	that is
for example/instance	in turn	therefore

Like other adverbials, most of these conjunctive adverbials are capable of appearing in different places in a clause; they may be found at the beginning, in the middle, or at the end of the independent clauses with which they occur. (We will discuss the punctuation of sentences with logical connectors below.)

Raccoons and bears are related animals. {
However, raccoons are much smaller.
 Raccoons are much smaller, *however*.
 Raccoons, *however*, are much smaller.

Figure 6. The Second Type of Logical Connector Called Conjunctive Adverbials

Additive
 emphatic: *in addition, moreover, furthermore, besides, also*
 appositional: *that is, in other words, for instance*
 comparative: *likewise, similarly*

Adversative
 proper adversative: *however, nevertheless, despite this, in contrast*
 contrastive: *in fact, actually, however, on the other hand, at the same time*
 correction: *instead, rather, on the contrary, at least*
 dismissal: *in any case, anyhow, at any rate*

Causal
 general causal: *therefore, consequently, for that reason, thus*
 causal conditional: *then, in that case, otherwise*

Sequential
then, next, first, second, last, finally, up to now, to sum up

Figure 7. The Four Classifications of Conjunctive Adverbials According to Halliday and Hasan

cal connectors in academic writing through 146 essays of Jordanian undergraduates which they found that among the categories proposed by Halliday and Hasan (Celce-Murcia and Larsen-Freeman, 1999) additive connectors are the most frequently used category followed by causative connectors, sequential, and adversative being the last. Among the 146 essays analyzed, the connector which tops the number for additive LCs (logical connectors) is *and*, and *in other words* the last. The frequency on the other hand of causative LCs shows *because* as the most frequently used and *because of* being the least frequent. For sequential LCs, the connector *first* comes first and *in short* as the least connector occurred. The least frequently used LC is the adversative with the word *but* being the most frequently used and *nevertheless* as the least.

Wong (2018) stressed that misuse of a logical connector could not only be seen as a linguistic error, but also as an issue that could lead to the unintended logical fallacy that could raise concerns about the capacity of the learner to reason.

Numerous researchers presented previous studies on the usage of logical connectors. In addition, in Table 3, cited studies have been summarized as follows:

The first item, through the International Corpus of Learner English, Granger and Tyson (1996, 2019) adopted a bottom-up approach which revealed the overuse and underuse of particular connectors amongst French EFL learners. Altenberg and Tapper (1998, cited in Rahimi and Qannadzadeh, 2019) did the same research and found that Swedish learners tend to underuse connectors in general.

Item number 3 talks about a study of Narita et al. (2014 as quoted in Ha, 2014; Rahimi and Qannadzadeh 2019) which found out there are 25 logical connectors such as *for example, of course, and first*, and they underuse *then, yet, and instead*, to name a few were substantially overused by Japanese EFL learners.

Item number 4 is a study by Cheryl (2006, as quoted in Rahimi and Qannadzadeh 2019) which found that there is none much overuse in Chinese Taiwanese EFL learners. A study by Omar (2018) examines Kurdish EFL learners' writing aiming at identifying transfer types, particularly the negative transfer. The study found some logical connectors that have been perceived as overused.

For Chinese EFL learners (Qing and Jiansheng, 2010; Jie, 2008; Yaochen, 2006; Meisuo, 2000 as quoted in Asassfeh, Alshaboul, and Alshaboul 2013), findings of different studies revealed Chinese learners' overuse and underuse resultative and listing logical connectors.

Factors Affecting the use and Misuse of Logical Connectors in EFL Writing

Weakness cover-up and intentional avoidance. Asassfeh, Alshaboul, and Alshaboul (2013) argue that the underlying factor of overusing and misusing logical connectors hints that low proficient writers try to hide their weakness in writing. On the contrary, when students feel such use can be troublesome on syntactic grounds, they avoid certain logical connectors intentionally.

L1 influence. Besides the overreliance on superficially using logical connectors, Chinese students' tendency, for example, in contrast to native speakers, the overuse and underuse of such relationships are linked to the transition of mother tongue, the lack of stylistic comprehension of learners and the lack of breadth and depth of lexical information (Asassfeh, Alshaboul, Alshaboul 2013). The same factor also applies to Arab EFL learners according to Hinkel (2001 as quoted in Asassfeh, Alshaboul, and Alshaboul 2013). L1 influence in L2 writing occurs in composing, organization, coherence and cohesion, and rhetoric as perceived by Omar (2018) on Kurdish EFL learners.

Failure in recognizing logical relationships. EFL teachers should emphasize that only when such proposals are logically connected logical connectors (LCs) are used. Such emphasis would lessen or filter inappropriate use and force logicity on illogical propositions. With this being said, appropriate use of LCs encompasses the recognition of constraints semantically and syntactically speaking.

Kurniawan, Dallyono, and Cahyowati (2019) cited Celce-Murcia and Larsen-Freeman (2016) that failure in grasping the logicity of sentences in the text may contribute to the erroneous output.

Table 1. Sample misuse and overuse of logical connectors according to celce-murcia and larsen-freeman

Logical Connector (LC)	Sample Sentence	Explanation	Problem Category
Because and Because of	*We were late because of we had car problems.	Because of – noun object	Misuse
For example and Such as	We had beaches that have good surf. *Such as, we like Hapuna and Rincon.	For example – conjunctive adverbial Such as – Complex prepositions	
During and While	*During I was making the dinner, the phone rang.	During – before noun phrases, acts as a preposition While – adverbial subordinator	
On the contrary and In contrast	I like skiing. On the contrary, my partner likes fishing.	On the contrary – to deny a proposition In contrast – to compare two things	
Moreover and Furthermore	My mother went to the dry cleaners. Moreover, she shopped for clothes.	Moreover/furthermore – a conclusion is expected from the connection of two clauses *and – to list of what the subject did	
Therefore	We had not eaten all day. Therefore, we decided to have dinner at McDonald's.	Therefore is used when a writer expects to argue for something when all the information is provided.	
Moreover	My father said, "Let's go to the beach on Saturday. Moreover, let's rent a boat."	Moreover is used in different registers.	Overuse

Table 2. Frequency, variety, and illogical use of logical connectors

EFL Learner	Logical Connector	Type	Illogical Use
Korean	Moreover	Additive	Overuse
	Furthermore		
	Besides		
	Finally	Chronological	
	Secondly		
	Instead	Contrastive	Underuse
Japanese	Yet		
Korean	Then	Inferential	
Japanese			
Arab	But	Adversative	Overuse
Japanese			Misuse
Jordanian			
Chinese	However		
	On the other hand		
Chinese Taiwanese	Besides	Additive	
	Plus		
Jordanian	And	Additive	Overuse
Arab	Because	Causative	
	First	Sequential	

Learner's lack of awareness and background. Overdependence on a specific set of logical connectors is related to the learner's level of awareness exercised when coping with LCs. This has been perceived through a study by Asassfeh, Alshaboul, and Alshboul (2013) wherein although occurred 32 times and even though occurred once despite their similarity. Students are believed to alter their use of LCs if they

are conscious of the options they have at their disposal.

Moreover, a low level of awareness of paragraph structure and adequate planning can also be noted. Also, if the learner fails to recognize the logic of what he or she is writing, based on his or her personal experience, appropriate logical connector use can be troublesome. The use of personal experience has also been supported by the claims of Omar (2018) which differentiates Kurdish EFL learners from native speakers.

Writing prompts. One possibility behind the absence of some LCs is the subject matter being written. Various topics may activate or trigger different conventions in the construction of paragraphs which affects the quantity and quality of logical connectors (Asassfeh, Alshaboul, and Alshboul 2013).

Lack of writing styles. Ha (2014) proposed that a possible interpretation of inappropriate use of logical connectors is a lack of writing style. In her study on Korean EFL learners, she suggested emphasizing the style difference between spoken and written language.

Pedagogical Implications of Logical Connectors in the EFL Setting

The use of genre-based approach. Thongchalerms and Jarunthawatchi (2020) studied the effect of a genre-based approach on teaching Thai EFL learners and through this, they found students made greater improvements in linguistic features and rhetoric organization. Hence, the genre-based approach which is associated with the concept that written discourse follows a particular convention or pattern, is deemed effective in the development of EFL writing competence.

Moreover, the advantages of the approach to writing pedagogy are that it enables learners to gain knowledge of both language characteristics and contexts and also to strengthen their understanding of how texts are structured and organized.

Table 3. Illogical use of logical connectors among EFL learners

No.	EFL Learner	Description	
1	French (Ha, 2014; Rahimi and Qannadzadeh, 2010)	<i>“learners should not be presented with lists of interchangeable connectors but instead taught the semantic, stylistic and syntactic behavior of individual connectors, using authentic texts”</i> (Granger and Tyson, 1996 as quoted in Rahimi and Qannadzadeh 2010) <i>“the learners use most frequently those connectors which add to, or emphasize a point rather than those which change the direction of the argument or take the argument logically forward.”</i> (Granger and Tyson, 1996 as quoted in Ha 2014)	In general, no overuse. Strong proof of overuse and underuse of such specific connector.
2	Swedish		Underuse
3	Japanese	Quantitative analysis of 25 logical connectors par French, Swedish, and Chinese EFL learners	Overuse
4	Chinese Taiwan	Usage of the largest category of logical connectors in two corpora: 23 final papers from MA TESOL students and 10 journal articles (Ha, 2014; Rahimi and Qannadzadeh, 2010)	No overuse
5	Kurdish	EFL learners’ conceptual transfer in L2 writing showed some logical connectors that have been overused.	Overuse
6	Chinese	Overuse additive statement and progressive relationships at the cost of listing, description and opposite relationships	Overuse Underuse Misuse
7	Spanish	Inappropriate and extensive use of logical connector	Misuse Overuse

Meaning-making method. In a study by Asassfeh, Alshabou, and Alshboul (2013) on Arab EFL undergraduates, it is recommended for EFL instructors to concern about the ability of their students to logically connect events or proposals and if the students are fully aware of the context of each proposition. Hence, the difficulties of EFL students with successful expenditure in LCs are due to linguistic rather than logical factors.

Accordingly, teachers should focus on improving the vocabulary pool of learners as a necessary prerequisite for understanding in actual EFL instruction. This notion is in line with the understanding that, rather than forming it, LCs mark or signal a relationship. Their usage when there is an uncertainty in the semantic relationship between two concepts, is most efficient and necessary. Therefore, EFL learners can rely heavily on the expressions when they find it difficult to create context from the proposals or phrases they associate (Asassfeh, Alshaboul, and Alshboul 2013). This recommendation has also been cited by Kurniawan, Dallyono, and Cahyowati (2019).

But, studies like that of Wong’s (2018) contrast on Asassfeh, Alshaboul, Alshboul (2013) explaining that this method might not constitute long-term learning. Wong further explained that using examples may be beneficial to some degree, but this approach does not spell out the invariant sense of the logical connector in question, as the learner, based on a few examples, is expected to draw their conclusions.

Metalinguage. Wong (2018) implies that to overcome such pedagogic obstacles, teachers may use natural semantic metalanguage (NSM) which paraphrases are formulated to clarify the context with full clarity. Because this metalanguage is universal, it can translate phrase constructs with full ease into any other language. The use of NSM and its branch Minimal English (Goddard & Wierzbicka, 2018), includes an expanded vocabulary and almost-commonly used

English words, which could conceivably allow learners to understand English (or another language) from the inside (Goddard & Wierzbicka, 2007).

Semantic and syntactic recognition. EFL instructors should stress that LCs are for associating two propositions only when such propositions are logically related. Such emphasis would lessen or filter inappropriate use and put logicity on schemes that are illogical. With this being said, the appropriate use of LCs encompasses recognizing constraints semantically and syntactically.

CONCLUSIONS

The overarching aim of this study was to investigate the use of logical connectors in EFL writing and to identify the common errors and difficulties that learners face in using them effectively. Logical connectors are invaluable linguistic features, as writers organize information, listeners and readers understand, and speakers communicate effectively through them. Whether written or spoken, mastering language skills, let alone the ability to write, is a painstaking job for both EFL and ESL learners, as it requires structural correctness. Nonetheless, learners’ language production errors are unavoidable in the course of language learning.

Ironically, reviewed literature shows that writing has gained great popularity in the field of research and yet Derakhshan and Shirejini (2020) have further positioned that despite this, and in addition to its demanding existence, there is a failure to improve the skills in the education process. This notion has been acknowledged in The Grammar Book of Celce-Murcia and Larsen-Freeman which becomes the backbone and instrument for identifying the key problems among EFL learners about the use of logical connectors in written English. EFL learners often struggle with the overuse, misuse, underuse, and misplacement of logical con-

nectors, and affective factors such as weakness cover-up, intentional avoidance, interference of the learner's first language, failure in recognizing logical relationships, and lack of awareness and background or personal experience also contribute to the illogical use of these connectors.

The paper was carried out via the meta-synthesis process. In order to extract common trends, studies on the writing parameters of EFL countries like China, Chinese Taiwan, Japan, Korea, India, Jordan, Kurdistan, and Spain have been checked and analysed. Through the results of the reviewed literature, the arguments of Celce-Murcia and Larsen-Freeman about the overuse, misuse, underuse, and misplacement of logical connectors have been proved correct.

Affective factors on the illogical use of these connectors are identified as a *weakness cover-up, intentional avoidance, interference of the learner's first language, failure in recognizing logical relationships, and learner's lack of awareness and background or personal experience*.

To address these challenges, this study recommends that teachers adopt *genre-based approaches*, emphasize *semantic and syntactic recognition*, and make use of *natural semantic metalanguage (NSM)* to improve learners' use of logical connectors in EFL writing.

REFERENCES

- Adiantika, H. 2015. Cohesive devices in EFL students' expository writing, English review. *Journal of English Education* 2301-7554. Advance online publication.
- Ahmad, M., M. A. Mahmood, and A. R. Siddique. 2019. Organisational Skills in Academic Writing: A Study on Coherence and Cohesion in Pakistani Research Abstracts. *Languages*. Advance online publication.
- Archila, P.A, J. Molina, and A.M. Truscott de Mejia. 2020. Enriching university students' use of logical connectors (LCs) in bilingual written scientific argumentation (BWSA). *International Journal of Bilingual Education and Bilingualism*. Advance online publication. doi: 10.1080/13670050.2020.1800586
- Ardin, H. 2017. Analyzing Errors In Recount Text Written By The Third Year Students Of SMAN 1JIKAP PGSD. *Jurnal Ilmiah Ilmu Kependidikan*. Advance online publication.
- Asassfeh, S. M., Y. Alshaboul, and S. Alshboul 2013. Distribution and Appropriateness of Use of Logical Connectors in the Academic Writing of Jordanian English-Major Undergraduates. *Journal of Educational & Psychological Sciences*. Advance online publication. doi: 10.12785/jeps/140320
- Bahaziq, A. 2020. Cohesive Devices in Written Discourse: A Discourse Analysis of a Student's Essay Writing. *English Language Teaching*. Advance online publication.
- Boustani, K. 2019. The Correlation between Translation Equivalence, as a Vocabulary Learning Strategy, and Tunisian EFL Learners' Speaking Anxiety. *Languages*. Advance online publication.
- Celce-Murcia, M. and D. Larsen-Freeman. 1999. Logical Connectors. In *The Grammar Book*. USA: Heinle & Heinle Publisher
- Chatterjee, T. 2016. Structural Changes in Bengali-English Bilingual Verbs through the Exploration of Bengali Films. *Languages*. Advance online publication.
- Derakhshan, A. and R. K. Shirejini. 2020. An Investigation of the Iranian EFL Learners' Perceptions Towards the Most Common Writing Problems. *SAGE Open*. Advance online publication.
- Fitria, T. N. 2019. Errors in students' writing composition in simple present tense "my daily activity". *Journal of English Language Education*. Advance online publication.
- Ha, M. J. 2014. A Corpus-Based Study on Korean EFL Learners' Use of English Logical Connectors. *International Journal of Contents*. Advance online publication. doi: 10.5392/ijoc.2014.10.4.048
- Indari, A. and R. R. D. Barus. 2019. The effect of temporal conjunction mastery and students' achievement in writing procedure text of the 2017/2018 eleventh year students of sma swasta persiapan stabat. *Jurnal Serunai Bahasa Inggris*. Advance online publication.
- Khatter, S. 2019. Analysis of the Most Common Essay Writing Errors among EFL Saudi Female Learners (Majmaah University) English Language Teaching. *Arab World English Journal (AWEJ)*. Advance online publication. doi: 10.24093/awej/vol10no3.26
- Kurniawan, E., R. Dallyono, and A. Cahyowati. 2019. Exploring logical connectors in journals with different indexing levels: A comparison between international and national indexed journals. *Indonesian Journal of Applied Linguistics*. Advance online publication. doi:10.17509/ijal.v9i1.16088
- Mohammad, T. and Z. Hararika. 2016. Difficulties of Learning EFL in KSA: Writing Skills in Context. *International Journal of English Linguistics*. Advance online publication.
- Nopita, D. 2011. constructing coherent ideas and using coherence devices in written descriptive essays: a study at the fourth grade english department students of STBA Haji Agus Salim Bukittinggi. *Lingua Didaktika. Jurnal Bahasa dan Pembelajaran Bahasa*. Advance online publication.
- Omar, J.A. 2018. Kurdish EFL learners' conceptual transfer in L2 writing. *Journal of Education Culture and Society*. Advance online publication. doi: 10.15503/jecs20181.163.172
- Rahimi, A. and J. Qannadzadeh. 2010. Quantitative usage of logical connectors in Iranians' EFL Essay writing and logical and linguistic intelligences. *Procedia - Social and Behavioral Sciences*. Advance online publication. doi: 10.1016/j.sbspro.2010.07.406
- Sabti, A.A, S. M. Rashid, V. Nimehchisalem, and R. Darmi. 2019. The Impact of Writing Anxiety, Writing Achievement Motivation, and Writing Self-Efficacy on Writing Performance: A Correlational Study of Iraqi Tertiary EFL Learners. *SAGE Open*. Advance online publication.
- Septiana, A.R. 2020. The Indonesian grammatical interference on EFL students' writing. *Journal of Research on English and Language Learning (J-REaLL)*. Advance online publication. doi: http://dx.doi.org/10.33474/j-reall.v1i1.5610

- Setyaningrum, R.R. and R. Fatmawaty. 2020. The Prepositional Errors in Students' Writing. *RJo-ELT (Journal of English Language Teaching) Fakultas Pendidikan Bahasa & Seni Prodi Pendidikan Bahasa Inggris IKIP*. Advance online publication. doi:10.33394/jo-elt.v7i1.2627
- Sügümlü, U., H. H. Mutlu, and E. Çinpolat. 2019. Relationship Between Writing Motivation Levels and Writing Skills Among Secondary School Students. *International Electronic Journal of Elementary Education*. Advance online publication. doi: 10.26822/iejee.2019553345
- Syarifudin. 2020. Survey on EFL Students' Writing Anxiety: Level, Types, and Causes. *Jurnal Pendidikan Bahasa Asing dan Sastra*. Advance online publication.
- Taheri, H., F. Sadighi, M. S. Bagheri, and M. Bavali. 2020. Investigating the relationship between Iranian EFL learners' use of language learning strategies and foreign language skills achievement. *Cogent Arts and Humanities*. Advance online publication. doi:10.1080/23311983.2019.1710944
- Thongchalerm, S. and W. Jarunthawatchi. 2020. The Impact of Genre Based Instruction on EFL Learners' Writing Development. *International Journal of Instruction*. Advance online publication. doi: 10.29333/iji.2020.1311a
- Tiruchittampalam, S., A.Ross, E. Whitehouse, and T. Nicholson. 2018. Measuring the Effectiveness of Writing Center Consultations on L2 Writers' Essay Writing Skills. *Languages*. Advance online publication.
- Wang, M. 2013. An Empirical Study on the Writing Ability of College Students with the Error Analysis Approach. *English Language and Literature Studies*. Advance online publication.
- Watcharapunyawong, S. and S. Usaha. 2012. Thai EFL students' writing errors in different text types: The interference of the first language. *English Language Teaching*. Advance online publication.
- Wong, J.O. 2010. The Semantics of Logical Connectors: therefore, moreover and in fact. *Russian Journal of Linguistics 2018*. Advance online publication.
- Yanti, D. and Y. Basthomi. 2019. Conjunctive adverbs in undergraduate students' articles. *Acitya: Journal of Teaching & Education*. Advance online publication.
- Zurniati, V. (2019). An Analysis of The Students Prepositional Errors in Writing Recount Text at English Department in Academic Year 2013/2014 at IAIN Imam Bonjol Padang. *International Journal of Educational Dynamics*. Advance online publication.