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The Use of Connectors in Argumentative Writing by EFL Undergraduate Students from the University of Burundi: A Quantitative Analysis

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Abstract

Although there is a large body of literature on the use of connectors by EFL learners in argumentative writing, African language learner groups are not represented and most studies have adopted a cross-sectional approach. This paper seeks to analyze how frequently connectors are used on the basis of pseudo-longitudinal data from first, second, and third-year undergraduate students from the Institute for Applied Pedagogy, University of Burundi. The study adopted the corpus linguistic and quantitative approaches. The data were collected through 2 writing assignments given to students in 2019. In total, 622 essays, amounting to 306,664-word tokens, were collected. Data preparation followed three steps, namely, typing the handwritten essays, preparing the TXT files, and metadata for the corpus. The latter was searched using AntConc tool, on the basis of a comprehensive list of 95 connectors, classified into 6 categories. The tool availed frequency information, that is, how often each connector occurs in the corpus. Percentages were computed using XLS facility and are presented in tables and graphs. Results indicate that 19 connectors were frequently used by learners, the most frequent ones being those which add information followed by those expressing a result relationship. However, connectors expressing transition and summation were found to be rarely used in the corpus. Another discovery is that learners in all three years of study seem to have the same preferences in terms of connectors. Furthermore, cases of misuse such as wrong combinations and incorrect spelling, semantic, stylistic and syntactic errors were observed at all levels. The findings of this study can be useful to learners, teachers, and material designers.

Keywords: connectors, EFL learners, preference, misuse, argumentative writing

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1. Introduction

Both writing and speech make use of important devices referred to as connectors. Connectors help join different text units, that is, words, phrases, sentences, clauses, and paragraphs together. According to Leech and Svartvik (1994 as cited in Tapper, 2005), connectors called *connectives* in the latter, function as "cohesive 'signposts' in discourse that help guide the reader or listener through the message by signalling how successive units are related" (p.116). Some examples are *in addition, because, therefore*, etc. It should be indicated that many other terms have been used in the literature, namely, conjunctions (Halliday & Hassan, 1976), linking adverbials (Biber, Johansson, Leech, Conrad, & Finegan, 1999), connectives (Byrne, 1979; Leki, 1989; Tang & Ng, 1995) to name but a few. For consistency's sake, the term *connector* is used in this study.

The use of connectors in learner writing has received much attention these last decades. Many studies have shown that the use of connectors by learners is problematic. Tang and Ng (1995), for example, have pointed out that "the misuse of connectors is an almost universal feature of English as a Second Language **(**ESL) students' writing" (p.105). Research conducted on the use of connectors by English as a Foreign Language (EFL) learner writers seems to suggest that learners tend to overuse, underuse and/or misuse connectors. One example of overuse much cited in the literature concerns the *additive* connectors - called *listing* connectors in this study (Field &Yip, 1992; Granger & Tyson, 1996; Güneş, 2017; Tang & Ng, 1995 as cited in Granger, 1996, p.20).

1.1 Statement of the Problem

There is abundant literature on the use of connectors by EFL learners. As a result, numerous EFL learner groups have so far been investigated. Examples include the French EFL learners (Gilquin & Granger, 2015; Granger & Tyson, 1996), the Swedish EFL learners (Tapper, 2005), Indonesian EFL learners (Mahendra & Dewi, 2017), the Brazilian EFL learners (Matte, 2017); Iranian EFL learners (Sabzevari, Haghverdi, & Bria, 2016), the Turkish EFL learners (Güneş, 2017; Uçar & Yukselir, 2017), Arab EFL learners (Al Mughrabi, 2017), and Chinese EFL learners (Milton & Tsang, 1993). An examination of the existing literature shows that African EFL learner groups, in general and Burundian EFL learner group in particular, have not been subject of investigation whatsoever. Moreover, from the researcher' s teaching experience of writing at the University of Burundi, it seems that the Burundian EFL learner group has the same challenges as other English learner groups already investigated. Another problem is that the studies which were carried out adopted a cross-sectional approach, that is, they targeted learners from different domains of study, such as science and humanities. It is also important to use longitudinal data in order to examine the use of connectors by EFL learners. Therefore, the present paper is based on pseudo-longitudinal data collected in first, second- and third-year students from the Institute for Applied Pedagogy, at the University of Burundi. Truly longitudinal data would be more interesting but the option of using pseudo-longitudinal data was dictated by to the time constraint. This study provides valuable information which can be used by both teachers and learners. In addition, the results can be used by materials designers for a better teaching of English connectors.

1.2 Research Questions

The present study was guided by the following research questions:

1. What are the connectors used by EFL learners from the Institute for Applied Pedagogy in argumentative writing?

2. What are the most frequently used connectors in argumentative writing by learners from the Institute for Applied?

3. What is the accuracy level of EFL learners from the Institute for Applied Pedagogy in the use of connectors in argumentative writing?

2. Literature Review

Many authors have indicated that the use of connectors in one's discourse is paramount in the interpretation of the message by the hearer/listener or the reader. Biber et al. (1999) indicate that "the primary function of connectors [referred to in their study as *linking adverbials*] is to state the speaker/writer's perception of the relationship between two units of discourse (p.875). As such, according to the same authors, such linking devices are "important in creating textual cohesion" (Biber et al., 1999). In other words, the use of connectors in one's speech or writing facilitates the interpretation process of the discourse, on the part of hearer or reader.

The idea of connectors as facilitating devices for discourse interpretation is also expressed by Celce-Murcia and Larsen-Freeman (1999 as cited in Sabzevari, Haghverdi, & Biria, 2016). According to these authors, adverbials (as

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they are called in their study), are defined as "lexical expressions that may add little or no propositional content by themselves but they serve to specify the relationship among sentences in oral and written discourse, thereby leading the reader to the feeling that the sentences hang together or make sense" (p.283). Given their role in the discourse, connectors have been referred to as signposts in discourse interpretation (Carrió-Pastor, 2013; Leech & Svartvik, 1994; Sabzevari, Haghverdi, & Biria, 2016; Tapper, 2005).

An interesting experiment was conducted by Mauranen (1993). The study compared two samples of academic texts, that is, a sample of texts containing connectors and the same sample from which connectors had been removed. The study found that the sample which contained connectors was perceived to be more logical, convincing, and authoritative than the sample with no connectors. The results of this study led to the conclusion that the use of connectors in discourse plays a facilitating role in the understanding of the text.

Whereas it is almost agreed among scholars that the use of connectors in discourse is helpful in the interpretation of a message, it is obvious that these connectors have to be used appropriately in order to fulfill their role of facilitators. This is in line with Sabzevari, Haghverdi and Biria's (2016) comment that "these logical connectors, if placed appropriately, function as signposts, guiding the reader through the discourse." In other words, if connectors are used inappropriately, they may even mislead readers. Studies carried out on the use of connectors by non-native learners of English suggest that their use is problematic. Most studies have shown that EFL learners tend to overuse, underuse, or misuse connectors in their writing.

Sabzevari, Haghverdi, and Biria (2016) analyzed how Iranian EFL students used connectors (referred to as conjunctive adverbials) in their writing. The study was based on 30 articles written by EFL learners and 30 articles written by native writers in the field of Applied Linguistics. Celce-Murcia and Larsen-Freeman's (1999) framework of connectors, a modified version of Halliday and Hassan's classification (1976) was used. This model incudes 4 categories of connectors, namely, additive, adversative, causal, and temporal connectors. The study found that there was a similar tendency for both groups (EFL and native writers) to use a set of connectors. In addition, the word-level analysis showed that EFL writers used more connectors than the native group while the sentence-level analysis showed that the native speakers used more connectors than the EFL group. Moreover, the EFL group had stylistic difficulties with some of the connectors such as *besides* and t*herefore*.

Another interesting study was carried out by Güneş (2017). It investigated how Turkish doctoral students used connectors (called linking adverbials) in their academic writing. AntConc software was utilized for the quantitative analysis of connectors used in students' doctoral dissertations. The study found that the Turkish doctoral students overused connectors and that the most overused ones were those expressing addition and result.

Still another study by Mahendra and Dewi (2017) examined how Indonesian students from Ganesha University of Education used connectors in their academic writing productions with focus on errors made. Ant Conc tool was used to analyze the data. The study found that the most difficult connectors (called transitions in their study) were *however*, *in fact*, *moreover*, *also*, *either* and *as well as.*

Yet another study was carried out by Tang and Ng (1995). It was conducted on the basis of 32 copies of essays collected from first year students at City University of Hong Kong (18 essays from Science students and 14 essays from Art students). The study sought to find out what connectors were commonly used, their positioning in the sentence as well as cases of misuse of connectors. They used Quirk et al.'s (1985) taxonomy of connectors. The Longman concordancer was used to find out the frequency for connectors. The study found that the most frequently used connectors were in the *additive*, *resultive*, and *contrastive* categories. It was also revealed that within *additive* connectors *and* was the most popular. In addition, *inferential*, *transitional* and *summative* connectors were found to be rarely used. According to the authors, this indicates that students are weak in explaining and developing ideas (Tang & Ng, 1995, p.112).

Matter (2017) carried out an investigation on how Brazilian students studying in British universities used connectors in comparison with how native speakers used them. The study was based on a corpus of Brazilian academic written English (BrAWE) amounting to 657,089 words and a corpus of British academic written English (BAWE) totaling 6,968,089 words. Biber et al.'s (1999) framework of connectors (enumeration and addition, apposition, Result/inference, Contrast/ concession and Transition) guided the study. *Sketch engine* was used to search the corpus and *Log-Likelihood (LL*) helped to test statistical significance. The study found that Brazilian students overused connectors as a whole, specifically connectors expressing additional ideas.

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The examination of existing literature has revealed that most of the previous studies on connectors adopted a cross-sectional approach. This idea is supported by Gilquin's (2015) comment in her discussion on learner corpus typology. She states that many studies have adopted a cross-sectional approach, and that, according to her, this is "partly explained by the fact that it is easier to collect a cross- sectional corpus than a longitudinal one" (p.28). Following up a class of students requires more investment in terms of time, energy, and probably financial means. This state of affairs explains why there exist more cross-sectional studies than longitudinal ones.

One study which adopted a longitudinal approach was carried out by Al Mughrabi (2017). This study investigated the frequency of errors in the use of connectors (referred to as *Discourse Markers*) by 40 English majors selected from first, second, third, and fourth year at Hashemite University in Jordan. Four categories of connectors were targeted, namely *additive*, *causative*, *adversative,* and *temporal* (cf. Halliday & Hassan's framework). The study found that the use of connectors by students is challenging, considering the errors they made. Specifically, the study revealed that the percentage of errors decreased as students advanced in their training as follow: 30%, 29%, 27%, and 14% in first, second, third, and fourth year respectively. The results led to the conclusion that the students' level in using connectors (or DMs) improves as their academic level evolves. However, these finding may not be authentic due to the fact that the study is based on a small sample of 40 students only. However, longitudinal studies are very scarce and the researcher notices that most studies which were conducted on the use of connectors adopted a cross-sectional approach. In relation with this idea, Gilquin and Granger (2015, p.10) suggest that there is "need of more longitudinal studies covering the full interlanguage continuum (from beginner to advanced) to complement the cross-sectional studies that have been the backbone of LCR (Learner Corpus Research) to date." In addition to focusing cross-sectional data; it is clear that no study targeted learners speaking an African language, and Kirundi in particular. This paper aims, therefore, to investigate the use of connectors on the basis of pseudo-longitudinal data consisting of essays written by first, second, and third-year undergraduate students from the University of Burundi.

2.1 Model

The present study is based on a model of connectors that was adapted from Quirk et al.'s (1985) framework. In addition, a comprehensive list counting 95 connectors classified into 6 categories was obtained after merging Tang and Ng's (1995), and Carrió-Pastor's (2013) lists of connectors. Let us indicate that these two studies were carried out on the use of connectors by EFL learners on the basis of Quirk et al.'s (1985) framework. Quirk et al. (1985, p.634) made a classification consisting of 7 categories of connectors (referred to as *conjuncts* in their work). These categories are *listing*, *summative*, *appositive*, *resultive*, *inferential*, *contrastive* as well as *transitional* connectors. The 7 categories are exemplified below:

Listing **(**2 sub-categories)

- Enumerative: e.g. *First*, *first of all*, *secondly*, etc.

- Additive (2 sub-categories): i) Equative: e.g. *Equally*, *likewise*, *simlarly,* etc..; ii) Reinforcing: E.g. *In fact*, *indeed*, *in addition*, etc.

Summative: e.g. *In short*, *in conclusion, in sum,* etc.

Appositive: e.g. *Namely*, *for example*, that *is*, *in other words*, etc.

Resultive (2 sub-categories):

-Causal: e.g. *Because*, *for*, *as*, etc.

- Resultive: *Consequently*, *therefore*, *then*, etc.

Inferential: e.g. *Otherwise*, *in that case*, *then*, etc.

Contrastive (4 sub- categories):

- Reformulatory: e.g. *Rather, more accurately, more precisely*, etc.

- Replacive: e.g. *Alternatively*, *on the other hand*, etc.

-Antithetic: e.g. *While, whereas*, *in contrast*, etc.

-Concessive: e.g. *Anyway*, *in any case*, *all the same*, etc.

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Transitional (2 sub-categories):

- Discoursal: e.g. *By the way, incidentally*, etc.

- Temporal: e.g. *Meanwhile, subsequently*, etc.

It should be noticed that some of these categories have sub-categories. For example, the *listing* category *is* subdivided into 2 sub-categories, namely *enumerative* and *additive.* In turn, the *additive* sub-category is further subdivided into two categories, i.e., *equative* and *reinforcing*. For the sake of simplicity in the analysis of the data, the sub-categories proposed by Quirk et al. (1985) are not considered in this work.

Among the 7 categories proposed by Quirk et al.'s (1985), we distinguish the *resultive* and *inferential* categories. The difference between the two types of connectors can be highlighted on the basis of explanations provided by Quirk et al. (1985) and Biber et al. (1999). According to Quirk et al. (1985), "inferential conjuncts indicate a conclusion based on logic and supposition" (p. 638). The following illustration is given: *You haven't answered my question, in other words, you disapprove of my proposal.* In turn, Biber et al. (1999) indicate that "linking adverbials in the result/ inferential category show that the second unit of discourse states the result or consequence of the preceding discourse - either logical or practical" (p.877). To the researcher's understanding, the difference between resultive and inferential connectors lies in the fact that resultive connectors introduce a result or consequence based on facts whereas inferential connectors express a result or consequence based on logic. In the researcher's view, this difference is quite subtle. As a result, with the Burundian learners' writing it was impossible to tell for sure if a connector was in the resultive or inferential category due to their low level in English. For this reason, the researcher decided not to emphasize the distinction between resultive and inferential categories but to merge them into one single category called *resultive*. This choice was made for the sake of intellectual honesty. Therefore, the list used in this study includes 6 categories, namely, listing, summative, appositive, resultive, contrastive, and transitional categories instead of 7 as proposed by Quirk et al. (1985).

Another important point to make is that while Quirk et al.'s (1985) framework and others such as Biber et al. (1999), Halliday and Hassan (1976) are indispensable references in the study of connectors, they do not offer comprehensive lists of connectors. The researcher noticed, for example, the absence of the connector '*in fact*" from all models consulted. Yet, from the researcher's teaching experience, it seems that this connector "*in fact*", which is in the *listing* category, is among the most preferred connectors by the EFL learners from the University of Burundi. This is the reason why, in addition to Quirk et al. (1985), two other works were consulted, i.e., Tang and Ng (1995) and Carrió-Pastor (2013). These two studies were both carried out on the use of connectors by EFL learners. They were, therefore, consulted in order to get a more comprehensive list of connectors for the present study. The list of connectors used in this study was obtained by merging the lists proposed by Tang and Ng (1995) and Carrió-Pastor (2013).

In a nutshell, a total of 95 connectors classified in 6 categories i.e., *listing*, *summative*, *appositive*, *resultive, contrastive*, and t*ransitional* were investigated in this study. This list is displayed in the following Table 1 below.

Table 1. List of connectors (adapted from Quirk et al., 1985)

Category	Number of connectors	Connector
Listing	32	first**,** second**,** firstly, secondly, the second + noun**,** finally**,** further**,** furthermore, in addition, moreover, lastly, last but not least, to begin with, in the first place, in the second place, similarly**,** for one thing**,** for another thing**,** above all**,** for a start**,** in the same way, likewise**,** third**,** thirdly**,** first of all, last, the last (reason/example, etc.), last of all, in fact, first and foremost, next, another
Summative	12	to sum up**,** to conclude**,** in summary**,** in sum**,** in short**,** in brief**,** in conclusion**,** overall**,** all in all**,** altogether**,** in a nutshell**,** to summarize

Appositive	10	that is, that is to say, in other words, for instance, for example, namely, e.g., i.e., such as, specifically
Resultive	12	consequently, hence, therefore, thus, as a result, as a consequence, in consequence, so, because, since, as, then
Contrastive	22	however, although, even though, though, on the other hand, instead, after all, on the contrary, nevertheless, in contrast, besides, anyway, still, nonetheless, alternatively, rather, more precisely, in any case, by contrast, again, yet, in spite of
Transitional	7	meanwhile, eventually, subsequently, originally, in the meantime, by the way, incidentally
Total	95	

4. Methodology

4.1 Design of the Study

This study adopts the longitudinal approach, which requires collection of data at different stages from a group of subjects. Given time constraints, the researcher resorted to pseudo-longitudinal data, collected from first, second, and third-year students at the Institute for Applied Pedagogy at the University of Burundi. In addition, the corpus-based approach was adopted. This approach investigates language on the basis of language corpora and computer tools such as AntConc, WordSmith, and so on. Finally, the quantitative methods of analysis are used. Specifically, the present study uses AntConc tool (Anthony, 2018) to generate frequency information for connectors in students' writing.

4.2 Instruments

4.2.1 The writing Assignment

The data for this study were collected through 2 writing assignments which were given to students of years 1, 2, and 3 of the Institute for Applied Pedagogy, at the University of Burundi. The assignments were given in 2019. Each of the assignments consisted of 3 argumentative topics from which students had to choose only one topic. Students were given a variety of topics to ensure that each one would get a topic of interest to write about. The following are some examples of topics given: *Polygamy should be banned in Burundi*; *Free access to the internet is one of the biggest threats to education*. Students were given 2 hours to write an essay of 700 words about a topic of their choice.

4.2.2 Questionnaire for Learner and Task Related Information

In addition to writing of an essay, students were asked to answer a questionnaire designed to elicit information concerning the learner variable (such as their name, age, mother-tongue, other languages spoken, etc.) as well as the task variable (date, course, teacher). This information helped in the preparation of the metadata for the study. Let us indicate that these metadata, together with the learners' essays, will be used to design a web interface for the Burundian learner argumentative writing, which may be useful in the future for both teachers and learners as well as for researchers.

4.3 Data Collection Procedures

In connection with lecturers, the researcher gave 2 writing assignments to students who were registered in first, second and third year in 2019 at the University of Burundi, Institute for Applied Pedagogy, more precisely in the English Department. The students were given 2 hours to write a 700-word argumentative essay in class. They were not allowed to use reference books such as grammar books or dictionary. However before writing their essay, they filed a form which sought information about the writer and task variables. The duration between the 2 assignments was less than

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or equal to 2 months. In total, 622 essays were collected. Details concerning the contribution of essays is shown in the following table (Table 2).

Table 2. The contribution of essays

Level	Task A	Task B	Total
Bac 1	175	144	319
Bac 2	70	98	165
Bac 3	66	69	135
Total	311	311	622

4.4 Data Coding

Having collected the handwritten essays from the students, the next step was data coding. This was done in two steps. The first step was to have the essays typed to get machine readable data. This activity was done by a team of 5 former English students from the University of Burundi. At this step, the typists were warned not to modify the writers' texts i.e., they were given firm instructions not to correct the writers' errors or add any other errors as typists. Here, the researcher completely agrees with Gilquin's (2015) comment in her discussion about the challenges of turning handwritten texts into typed texts. She points out that keyboarding "can be quite tricky as the texts have to be reproduced exactly as they are, including the learners' errors but without introducing additional ones" (p.19). The texts were then edited by the typists in collaboration with the researcher. The next step consisted of preparing the "TXT" files and metadata for the corpus. In preparing TXT files, the researcher was looking for a format which is compatible with AntConc tool to be used in the analysis of the corpus.

4.5 The Size of the Corpus

The corpus for this study consists of 622 essays totaling 306, 664-word tokens as shown in Table 3 below.

Table 3. The size of the corpus

The sub-corpora	Number of essays	Word types	Word tokens
Bac1_A	175	3,826	63,829
Bac 1_B	144	4,311	68,528
Bac 2_A	70	2,989	40,052
Bac 2_B	98	3,862	64,366
Bac 3_A	66	2,701	34,017
Bac 3_B	69	2,885	35,872
Total	622	8,920	306,664

4.6 Data Analysis Procedures

As far as data analysis is concerned, the corpus was searched using AntConc tool in order to identify which connectors were used and how often they occurred in the corpus. Thanks to this tool, especially the *concordance* and *start*

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facilities, the researcher searched all the connectors investigated. To illustrate, let us consider an AntConc search for the connector "*in summary*", as displayed in Figure 1 below.

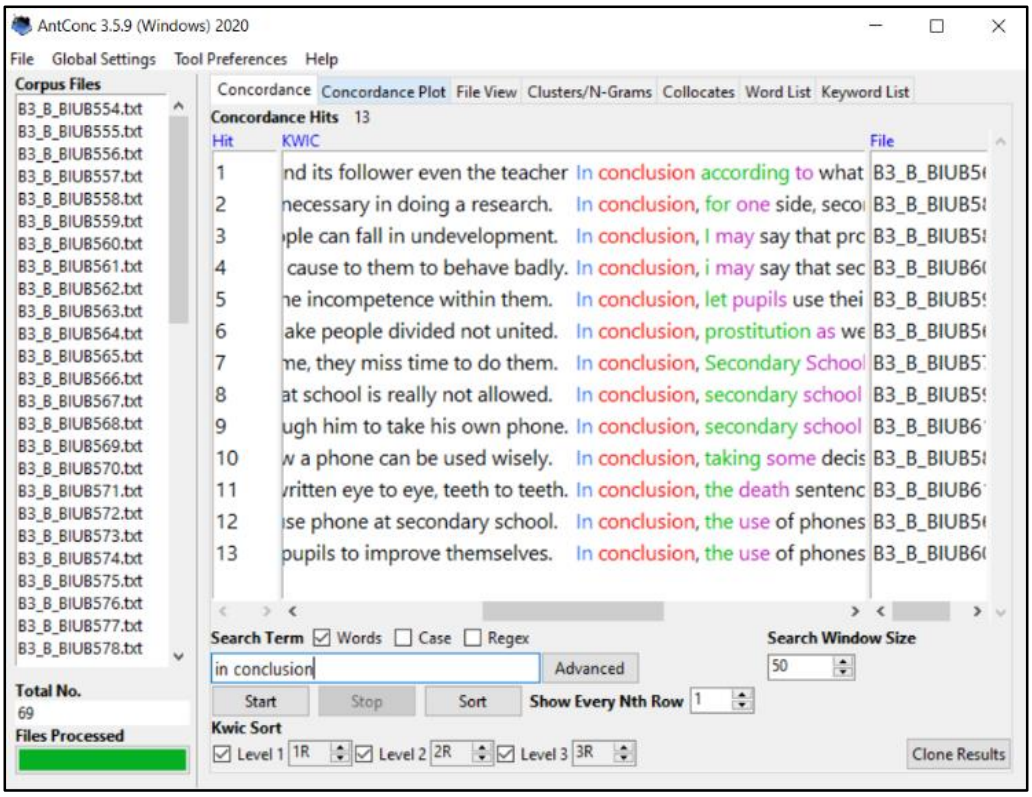


Figure 1. AntConc search results for the connector *in summary*

In this figure, a set of information should be understood. First, the sub-corpus searched consists of texts written by year 3 students (B3) which were written in response to the second assignment (B following the _ sign). As indicated in previous discussion, students were given two writing tasks. In addition, Figure 1 shows that there are 13 concordance hits (examples/occurrences) for the connector *in summary*. The same search exercise was done for all the connectors investigated and the number of examples for each connector was recorded in an XLS file. It should be noted that the search with AntConc was sometimes followed by manual sorting of the data. This was done in cases where the same could have several functions. For example, in the following sentences extracted from essays written by first year students, the word ***so*** is an adverb in (1) while it is a connector in (2).

> *1. Its [polygamy] consequences are* **so** *huge and some of them can be such as: hate among the wives, lack of satisfying the needs of the family, problems of schooling for the children and how ability in alimentation issue.*

> *2. Polygamy is a handicap in Burundi development* ***so*** *the government might take a measure to punish the people behave like that.*

Therefore, all the cases where the searched word did not play the role of connector were removed. Similarly, cases in which the function of the searched word (e.g. summative, resultive, etc.) was not clear were not counted. After the manual sorting of the data, the next step was to determine the frequency for each connector in percentage using XLS facility.

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5. Results

In this section, the researcher presents the results of the research. Based on frequency information provided by AntCon tool, the researcher calculated the total use and determined frequencies in percentages for all connectors investigated thanks to XLS facility. The results are presented in Table 4 below.

Table 4. Overall use of connectors by Burundian EFL learners

	Connectors	Connector variants	Burundian learners 1		Burundian learners 2		Burundian learners 3		Total use	%
			Text A_174 essays	Text B_143 essays	Text A_70 essays	Text B_98 essays	Text A_66 essays	Text B_69 essays		
	Listing									
1.	First		6	5	5	0	10	6	32	0,48
2.	Second	2a) second	4	3	2	3	9	4	25	0,37
		2b) on the second hand	0	0	0	0	0	1	1	0,01
		2c) on the second side	0	0	0	1	0	2	3	0,04
3.	Firstly		18	21	11	10	7	6	73	1,09
4.	Secondly	4a) secondly	30	22	15	19	16	10	112	1,67
		4b) secondary	2	3	3	6	1	4	19	0,28
		4c) *secondry	1	0	0	0	0	0	1	0,01
5.	The second+noun		2	0	2	0	2	0	6	0,09
6.	Finally		25	24	7	13	5	3	77	1,14
7.	Further		0	0	0	0	0	1	1	0,01
8.	Furthermore	7a) furthermore	14	11	9	13	5	7	59	0,88
		7b) *further more	3	5	0	1	0	3	12	0,18
9.	In addition		61	48	17	35	13	16	190	2,83
10.	Moreover	10 a) moreover	43	40	17	20	19	16	155	2,30
		10 b) *morover	1	0	0	0	0	1	2	0,03
11.	Lastly		4	1	0	3	6	3	17	0,25
12.	Last but not least		1	0	1	0	0	0	2	0,03

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13.	To begin with		0	0	0	0	0	2	2	0,03
14.	In the first place		0	0	0	0	0	0	0	0,00
15.	In the second place		0	0	0	0	0	0	0	0,00
16.	Similarly		0	1	0	0	0	0	1	0,01
17.	For one thing		0	0	0	0	0	0	0	0,00
18.	For another thing		0	0	0	0	0	0	0	0,00
19.	Above all		2	1	0	0	0	0	3	0,04
20.	For a start		0	0	0	0	0	0	0	0,00
21.	In the same way		6	0	0	0	0	0	6	0,09
22.	Likewise		1	0	0	1	0	0	2	0,03
23.	Third		1	1	1	7	5	0	15	0,22
24.	Thirdly	24a) thirdly	10	6	7	8	7	7	45	0,67
		24b) *firdly	1	1	0	0	0	1	3	0,04
25.	First of all		21	27	15	21	14	12	110	1,64
26.	Last		0	0	0	0	0	2	2	0,03
27.	The last (reason/example, …)		3	0	0	3	0	4	10	0,15
28.	Last of all		0	0	0	0	0	0	0	0,00
29.	In fact		57	45	33	41	20	28	224	3,33
30.	First and foremost		1	0	0	0	0	0	1	0,01
31.	Next		0	1	1	2	0	0	4	0,06
32.	Another		7	6	8	13	8	4	46	0,68
	Summative									
33.	To sum up		2	4	7	17	8	3	41	0,61
34.	To conclude		5	7	7	10	12	9	50	0,74
35.	In summary		0	0	0	0	0	0	0	0,00
36.	In sum		0	0	0	0	1	1	2	0,03
37.	In short	37a) in short	2	0	5	8	2	2	19	0,28
		37b) *in short words	0	0	0	0	0	1	1	0,01
38.	In brief		2	1	1	0	0	0	4	0,06
39.	In conclusion	39a) in conclusion	26	28	24	30	12	13	133	1,98

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		39b) *as conclusion	6	11	2	1	2	3	25	0,37
		39c) *as a conclusion	2	3	1	2	0	0	8	0,12
40.	Overall		0	0	0	0	1	0	1	0,01
41.	All in all		15	7	11	6	4	2	45	0,67
42.	Altogether		0	0	0	1	0	0	1	0,01
43	In a nutshell		3	2	2	4	7	6	24	0,36
44.	To summarize		1	0	0	0	0	0	1	0,01
	Appositive									
45.	That is		7	0	12	10	11	15	55	0,82
46.	That is to say		3	1	0	0	0	0	4	0,06
47.	In other words		2	2	0	1	6	4	15	0,22
48.	For instance		41	37	23	35	19	26	181	2,69
49.	For example	49a) for example	116	130	62	114	51	45	518	7,70
		49b) *for examples	7	1	1j	0	1	0	10	0,15
		49c) *for examples	0	1	0	0	1	0	2	0,03
		49d) *for example	2	3	4	4	1	0	14	0,21
50.	Namely		0	1	1	0	1	0	3	0,04
51.	e.g.		0	0	0	0	2	0	2	0,03
52.	i.e.		0	0	0	0	0	0	0	0,00
53.	Such as		56	48	21	55	27	41	248	3,69
54.	Specifically		1	0	0	0	0	0	1	0,01
	Resultive									
55.	Consequently		4	11	6	5	5	5	36	0,54
56.	Hence		2	3	4	2	4	0	15	0,22
57.	Therefore		36	31	39	43	27	23	199	2,96
58.	Thus		21	9	14	5	3	9	61	0,91
59.	As a result		5	2	5	8	3	3	26	0,39
60.	As a consequence		0	0	0	0	0	0	0	0,00
61.	In consequence		0	0	0	0	0	0	0	0,00
62.	So		46	53	17	24	23	15	178	2,65

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63.	Because		602	685	357	523	235	272	2674	39,76
64.	Since		4	3	10	32	17	16	82	1,22
65.	As		6	11	0	5	3	10	35	0,52
66.	Then		7	4	11	16	17	13	68	1,01
	Contrastive									
67.	However		25	27	18	17	16	20	123	1,83
68.	Although		11	22	4	12	1	6	56	0,83
69.	Even though		17	14	18	27	2	14	92	1,37
70.	Though		0	2	1	35	6	7	51	0,76
71.	On the other hand		8	5	8	6	7	6	40	0,59
72.	Instead	72a) instead	1	1	5	5	0	3	15	0,22
		72b) instead of	17	45	14	58	8	22	164	2,44
		72c) instead to	0	2	0	4	0	0	6	0,09
73.	After all		2	0	0	0	1	0	3	0,04
74.	On the contrary		1	0	2	0	0	1	4	0,06
75.	Nevertheless		4	5	2	3	2	0	16	0,24
76.	In contrast		4	0	0	0	0	3	7	0,10
77.	Besides		1	8	0	3	2	6	20	0,30
78.	Anyway		1	3	2	1	0	0	7	0,10
79.	Still		1	0	0	0	0	0	1	0,01
80.	Nonetheless		0	0	0	0	0	0	0	0,00
81.	Alternatively		0	0	0	1	0	0	1	0,01
82.	Rather		1	1	2	8	4	4	20	0,30
83.	More precisely		0	0	0	0	0	0	0	0,00
84.	In any case		0	0	0	0	0	0	0	0,00
85.	By contrast		0	0	0	1	0	1	2	0,03
86.	Again		4	3	0	5	0	3	15	0,22
87.	Yet		0	1	1	2	2	3	9	0,13
88.	In spite of		0	0	0	2	0	0	2	0,03
	Transitional									
89.	Meanwhile		1	1	1	0	0	0	3	0,04
90.	Eventually		0	0	0	0	1	0	1	0,01
91.	Subsequently		0	0	0	0	0	0	0	0,00

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92.	Originally	0	0	0	0	0	0	0	0,00
93.	In the meantime	0	0	0	0	0	0	0	0,00
94.	By the way	12	8	3	0	0	1	24	0,36
95.	Incidentally	0	0	0	0	0	0	0	0,00
	Total							6725	100,00

The analysis of the results displayed in Table 4 above reveals that the majority of the connectors investigated were used by EFL learner writers from the University of Burundi. Specifically, out of 95 connectors investigated, 78 connectors were used by learners representing 82.1 %. Only 17 connectors (representing 17.9 %) were not used at all levels. These are *in the first place, in the second place*, *for one thing*, *for another thing, for a start*, *last of all*, *in summary*, *i.e.*, *as a consequence*, *in consequence*, *nonetheless*, *more precisely*, *in any case*, *subsequently*, *originally*, *in the meantime* and *incidentally*. These results suggest that the Burundian EFL learners, at all levels, are in general aware of the importance of connectors in writing.

Concerning the most frequently used connectors, the results of this study show that out of a total of 95 connectors investigated, 19 connectors are frequently used by Burundian EFL learners. Attention should be drawn on the fact that previous research on the use of connectors by learner writers has used the terms "overuse" and "underuse." However, what these terms mean is not yet clear. For the purposes of this study, we consider that a connector is "frequently used" or overused if it represents 1% and above. In Burundian learner writing, the most frequently used connectors are *because, for example, such as, in fact, therefore, in addition, for instance, so, instead of, moreover, in conclusion, however, secondly, first of all, even though, since, finally, firstly* and *then.* These are presented in descending order of importance together with their frequencies and corresponding reference number in the following table 5 below.

Table 5. The most frequently used connectors by Burundian EFL learners

Rank	Connector	Reference number in Table 4	Category	Frequency in %
1.	Because	63	Resultive	39.76
2.	For example	46a	Appositive	7.70
3.	Such as	53	Appositive	3.69
4.	In fact	29	Listing	3.33
5.	Therefore	57	Resultive	2.96
6.	In addition	9	Listing	2.83
7.	For instance	48	Appositive	2.69
8.	So	62	Resultive	2.65
9.	Instead of	72b	Contrastive	2.44
10.	Moreover	9a	Listing	2.30
11.	In conclusion	39a	Summative	1.98
12.	However	67	Contrastive	1.83
13.	Secondly	4a	Listing	1.67
14.	First of all	25	Listing	1.64

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15.	Even though	69	Contrastive	1.37
16.	Since	64	Resultive	1.22
17.	Finally	10	Listing	1.14
18.	Firstly	3	Listing	1.09
19.	Then	66	Resultive	1.01

As Table 4 shows, *because* is by far the most frequently used connector representing 39.76 %, followed by *for example* (7.70%), *such as* (3.69%) and *in fact* (3.33%). Other most frequently used connectors are *therefore* (2.96%), *in addition* (2.83%), *for instance* (2.69%), *so* (2.65%), *instead of (2.44 %)*, and *moreover (*2.30%), etc. In terms of category, the results show that frequently used connectors are found in all categories except in the transitional category. In addition, it is obvious that the listing category is the most preferred one with *in fact* coming at the top. The resultive category is the next preferred category with *because* as the most preferred connector. The contrastive and appositive categories also occur but to a lesser extent than the listing and resultive categories. The summative category counts only one frequently used connector, that is, *in conclusion*. Finally, the transitional category is the only one which does not have any frequently used connectors. Table 6 below summarizes the Burundian EFL learners' preferences in terms of category.

Table 6. The Burundian EFL learners' preference in terms of categories

Category	Number of preferred connectors	Preferred connectors
Listing	7	*in fact, in addition, moreover, secondly, first of all, finally, firstly.*
Resultive	5	*because, therefore, so, since, then*
Contrastive	3	*instead of, however, even though*
Appositive	3	*for example, such as, for instance*
Summative	1	*in conclusion*
Transitional	0	
Total	19	

From Table 6, we can see that the listing category is the most preferred one counting more frequently used connectors. On the other hand, the transitional category counts no frequently used connectors. This paradox, whereby some categories are preferred while others are not, is portrayed in the following graphs representing, respectively, the listing and the transitional categories.

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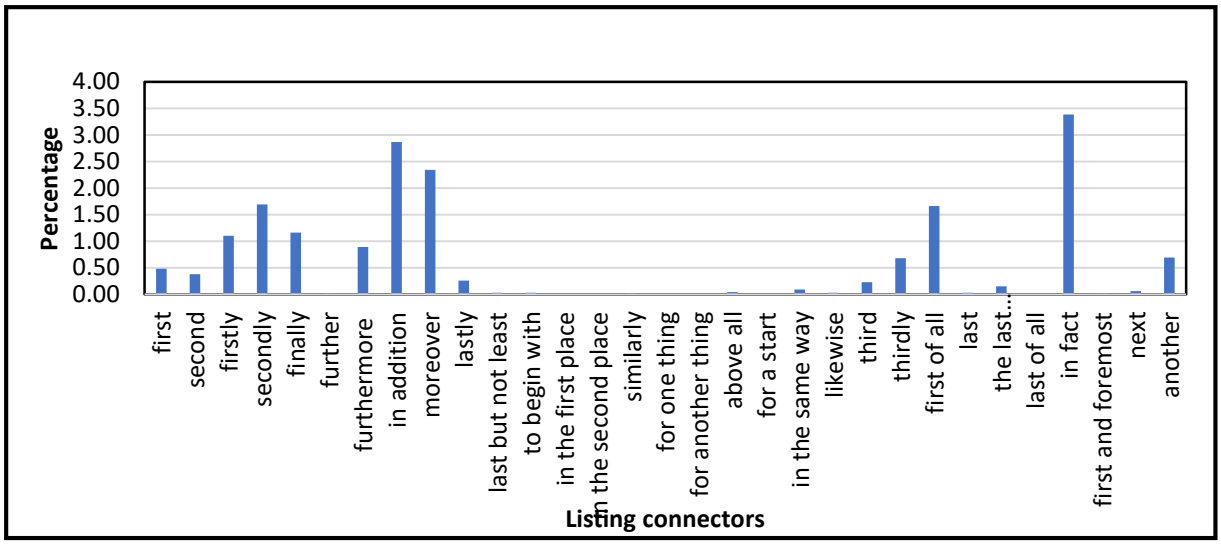


Figure 2. Frequency of listing connectors in Burundian EFL writing

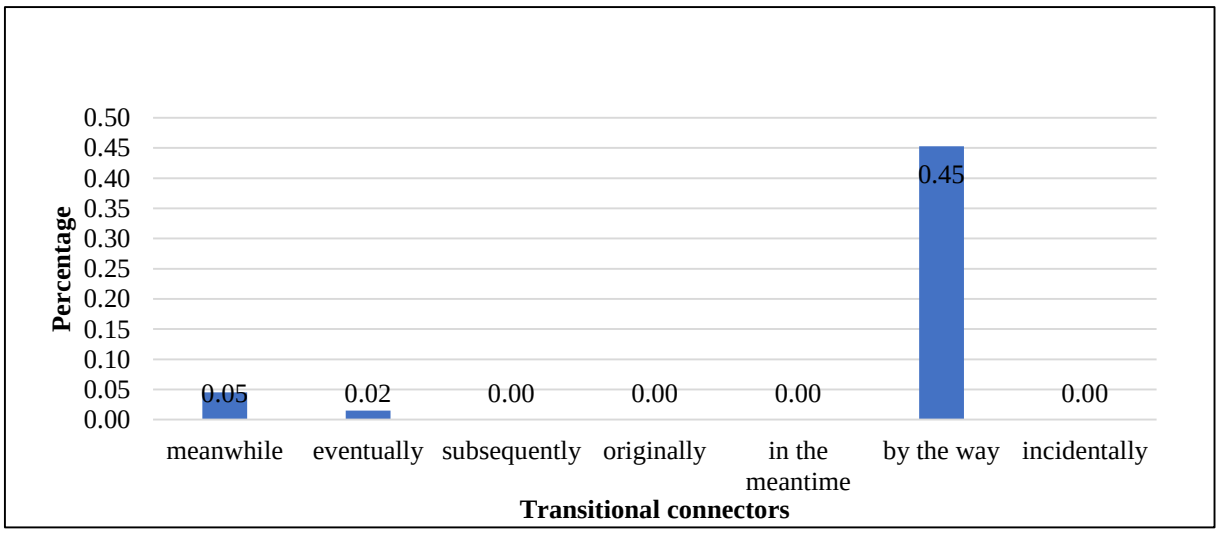


Figure 3. The frequency of transitional connectors in Burundian EFL writing

The listing category counts 31 connectors. It is the richest category. Out of these 31 connectors, 7 are frequently used by Burundian EFL learners with *in fact* coming at top. On the contrary, the transitional category counts only 7 connectors. Among these, no one is frequently used in the Burundian EFL learner writing. In this category, the connector with the highest percentage is *by the way* representing 0.45%. Since this connector's percentage is below 1%, we classify it in the group of underused connectors.

Another important point to make is that Burundian EFL writers at all levels seem to have the same preferences in terms of connectors. Consider, for example, the connector *in fact* which is very much preferred by Burundian EFL learners. We find many examples of this connector at all levels. There are 102 examples in year 1, 74 in year 2, and 48 examples in year 3. The same tendency is observable for the connector *for instance* which is also favoured by Burundian EFL learners. We find 78 examples of it in year 1, 58 examples in year 2, and 42 examples in year 3. In contrast, the word *hence* is underused in the Burundian learner corpus. We find 5 examples in year 1, 6 examples in

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year 2, and 4 examples in year 3. Another example of underuse is *nevertheless*. We find 9 examples in year 1, 5 examples in year 2, and 2 examples in year 3. Still another example of underuse is *namely*. We have 1 example of it in year 1, 1 example in year 2, and 1 example in Year 3. These examples confirm the fact that this group of learners has the same preferences in the matter of connector use. This tendency also applies to connector misuse which is discussed below.

So far, we have discussed on issues related to the frequency of connectors in learner's writing. However, the results of this study also indicate that learners at all levels still encounter difficulties in the use of some connectors. In fact, the examination of results displayed in Table 4 above shows that some of the connectors investigated have variants in the learners' writing, corresponding to the learners' errors. For example, the connector *secondly* (see item 4 in Table 4) has three variants, namely, *secondly, secondary* as well as **secondry*. This variation resulted from a spelling error on the part of learners who confused *secondary and *secondry* with *secondly.* Another example concerns the connector *in conclusion* (item 39 in Table 4). This connector has 5 variants, namely *in conclusion, as conclusion, by conclusion, in a conclusion, as a conclusion*. The correct combination is *in conclusion* and the other variants result from wrong word combinations on the part of learners. Following are some of the errors related to spelling and word combination as well as those resulting from confusion of words, as represented in Table 7 below.

Table 7. Misuse of connectors related to spelling and wrong combinations

Correct form	Incorrect form(s)	Problem
in conclusion	as conclusion as a conclusion by conclusion in a conclusion	wrong combination
in short	in short words	wrong combination
Secondly	secondary, *secondry	confusion and spelling
Furthermore	*further more	Spelling
Thirdly	*firdly	Spelling
second/secondly	on the second hand on the second side	wrong combination
Moreover	*moreover	Spelling
for example	for examples *for exemples *for exemple	Spelling

It is noticeable that these errors are made at all levels, years 1, 2, and 3. Let us take the example of *as conclusion.* We have 17 examples in year 1, 3 examples in year 2, and 5 examples in year 3. In total we have 25 examples representing 0.37%. Another example of misuse is the word *secondary* which is confused with the connector *secondly*. We have 5 examples in year 1, 9 examples in year 2, and 5 examples in year 3 totalling 19 examples. *Secondary* represents 0.28 % of all the connectors investigated. More cases of misuse exist in the corpus such as *in fact* used without a comma. (E.g. *….bstitute the prostitution with other activities. In fact too many leaders have been trying to* (AntConc result, year 1). Following are some examples of misuse of the connector *in conclusion* in year 1, 2, and 3.

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As conclusion, couples are allowed to make their love and in that time they have to know that even if they are in love they have to waiting for making a marriage without living together because to live together before a marriage causes many problem in life (year 1).

By conclusion, prostitution should be prohibited here in Burundi even all over the world because it has no education which is better for them even for us (year 2).

As a conclusion, it would be better to allow secondary school pupils to use mobile phone because most of the cases, mobile phones help them in many ways (year 3).

It should be indicated that not all learners' misuse of connectors is reflected in Table 2 above. We can mention, for example, the misuse of the connector *so* which is used to introduce the concluding paragraph and is therefore equated with *in conclusion*. Its overuse by Burundian EFL learners is also evidence of lack of stylistic awareness of this group of learners. Let us indicate that connector misuse will be discussed in much greater detail in another paper on the basis of qualitative analysis of the learners' writing, i.e., the teachers' assessment of the learners' essays.

6. Discussion

This study has shown that out of 95 connectors investigated, 78 connectors were used by learners at all levels and that only 17 connectors were not used. These results suggest that the learners investigated are aware of the need to use connectors in writing. The results also suggest that Burundian learners at all levels, year 1, 2, and 3 have the same tendency in the use of connectors, that is, they have the same preferences in terms of connector use. In terms frequency of individual connectors, this study has shown that, out of 95 connectors investigated, 19 connectors are frequently used by English majors from the University of Burundi. These are *because, for example, such as, in fact, therefore, in addition, for instance, so, instead of, moreover, in conclusion, however, secondly, first of all, even though, since, finally, firstly,* and *then.* As regards the preference of the categories, it has been revealed that most frequently used connectors are from the listing category followed by the resultive category. Within the listing category, the connector with the highest percentage is *in fact*. Contrastive and appositive categories are also frequently used but to a lower extent compared to the listing and resultive connectors. Concerning the *summative* category, it counts only one frequently used connector, namely *in conclusion* while the *transitional* category counts no frequently used connectors. Finally, the study has revealed that the learners targeted still have challenges in the use of connectors. For example, the analysis of the corpus has shown that some students, at all levels, use wrong combinations such as *as a conclusion, as conclusion, in a conclusion, by conclusion*, instead of the summative connector *in conclusion.*

A study conducted by Güneş (2017) reached similar results. The study showed that the most overused connectors by Turkish doctoral students are in the *listing* (called *additive*) and *resultative* categories. The *listing* (*additive)* and the *resultive* categories are also cited by Tang and Ng (1995) to be among the most frequently used categories. Concerning the *transitional* and *summative* connectors, the results of the present study are in line with Tang and Ng (1995). Their study reached the conclusion that transitional and summative connectors, among others, were found to be rarely used by first year students at City University of Hong Kong.

The findings of this study contrast with from those of Tapper (2005). Her study investigated how advanced Swedish EFL learners used connectors in argumentative essays in comparison with how native speakers of English (a group of American University students) used them. The study found that *contrastive* connectors were the most frequently used, followed by the *resultive*, the *clarifying,* and the *additive (listing) connectors*. When we analyze Tapper's (2005) results, we can see that the preference of the connectors is somehow reversed with contrastive connectors coming at the top.

As far as the listing/additive category is concerned, it seems to be one among the most preferred categories by many learner groups. This listing/additive category is cited as one among the most preferred categories in many studies such as Granger and Tyson (1996), Güneş (2017), and Tang and Ng (1995). Granger and Tyson (1996) found that the Louvain French EFL learners overused listing connectors and appositive connectors (called in their study additive and corroborative connectors respectively). They indicated that "learners use most frequently those connectors which add to, exemplify or emphasize a point rather than those which change the direction of the argument or take the argument logically forward" (p.20). They also reported that the same findings were reached by a study conducted by Field and Yip (1992) on the writing of Hong Kong students. The fact that the listing/additve category is one among the most favoured connectors by learner groups makes sense because, as Quirk et al. (1985), indicate, the listing role is "a basic language function" (p.636). Learners from the University of Burundi, like many other learner groups, though they are

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at an advanced level, remain babies in developing ideas since they prefer the most basic roles in connecting ideas in their writing. Care should be taken in designing course materials and teaching to ensure that learners are trained to use the more complex connecting roles in their writing. In addition, the connectors should be introduced to students in such a way that the latter might learn a variety in each category.

Concerning individual connectors, the results of this study reveal that one of the most overused connectors in Burundian EFL learner corpus is *in fact.* Granger and Tyson (1996) and Gilquin and Granger (2015) found similar results. These studies showed that French speakers investigated overused the connector *in fact*. This overuse was interpreted by the researchers as a result of transfer of the equivalent French "en fait" (p.12). Gilquin and Granger (2015) examined how learners of English from different mother tongue backgrounds used connectors. They found that French speaking learners (i.e., Bulgarian and Italian) overused "in fact" but that it was not the case in other groups. They, therefore, suggested that probably the overuse of the connector *in fact* had to do with transfer of the French equivalent "en fait." The Burundian EFL learners' overuse of the connector "in fact" is also probably a result of transfer of the equivalent "en fait"/ "au fait" which is very common in Kirundi-French code-switching as in "Ndashobora kuguha iyi invitation ukayintwarira kwa Karori? *En fait*/*au fait* jewe naramurondeye ndamubura" (Could you please give this invitation to Karori [name of a person]? *En fait*, je l'ai cherché mais je ne l'ai pas trouvé.). Let us indicate that French has an important role in Burundi. It is an official language, a status it shares with Kirundi, the native language of Burundi. This study has shown that French bears an influence on the learning of English at least in the domain of connectors.

Another important issue about the use of individual connectors by Burundian EFL learners is their lack of stylistic awareness. One example is their frequent use of the connector *so* in academic writing. The results of this study indicate that *so* is among the most frequently used connector in Burundian EFL learner writing. More precisely, *so* is the 8th most frequently used connector (c.f. Table 3 above). Such a result contradicts Biber et al. (1999). This study investigated, on the basis of corpus data, how English language is used across different genres, namely, conversation, fiction, news, and academic prose. Concerning the use of connectors, the study found that, in academic prose, the connector *so* is rarely used while it is the most frequently used connector in conversation, whether British or American (p.887). Therefore, the overuse of the connector *in fact* by Burundian EFL learners is seen as resulting from their lack of stylistic awareness.

A no less important result that deserves discussion is the evident preference by Burundian EFL learners of the resultive connector *because*. In fact, *because* is the most preferred connector by this group of learners representing 39.76% followed by *for example* representing 7.70 %. One can see that there exists a very wide gap between the frequencies of these two connectors. The high frequency of *because* may be explained by the fact that leaners have very limited resources in terms of alternative connectors within the resultive category, that is, students probably do not know a variety of words to express the same meaning such as *since*, *as* in Table 1. Students should be equipped with a variety of resources in order to write more effectively. It could also mean that Burundian learners like giving excuses or reasons for actions even when these are not necessary.

Finally, the results of this study indicated that Burundian EFL learners have many challenges in the use of connectors. These include semantic, stylistic, syntactic errors as well as errors related to word combination, spelling, and confusion of words. It is worth indicating that errors of spelling and confusion of connectors are not reported in the literature in any group of learners. Other authors reported other challenges but not those related to spelling. Granger and Tyson (1996), for example, analyzed argumentative essays written by French EFL learners in comparison with essays written by native speakers of English. The study revealed that the French EFL learners misused connectors on the semantic, stylistic, and syntactic levels. Thus, such errors of spelling and those resulting from confusion are evidence of a low level in English on the part of Burundian EFL writers which should be handled by all concerned steak-holders, namely, decision-makers, teachers, researchers, and students themselves.

7. Conclusion

The present study investigates how frequently English majors from the University of Burundi use connectors in their argumentative writing. The study was conducted on the basis of pseudo-longitudinal data collected in years 1, 2, and 3 in the department of English, at the Institute for Applied Pedagogy. Adopting the corpus linguistic approach, the study analyzed 95 connectors classified into 6 categories. AntConc tool was used to search the corpus in order to find the targeted connectors. The results of this study indicate that learners at all levels tend to have the same preferences in terms of connectors and categories. In terms of category, it was found that the *listing* category is the most preferred

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one followed by the *resultive* while the *contrastive* and *appositive* categories were used to a lesser extent. Finally, the *summative* and *transitional* categories were found to be rarely used. In terms of individual connectors, it was found that 19 connectors out of 95 were frequently used by learners, the most frequently used ones being *because, for example, such as, in fact, therefore, in addition, for instance, so, instead of, moreover, in conclusion, however, secondly, first of all, even though, since, finally, firstly,* and *then.* Such a result is an indication of learners' awareness of the importance of connectors in academic writing.

This study has also revealed that "because" is by far the most preferred connector probably due to a lack of alternatives within the resultive category. Another connector which draws the researcher's attention is the connector in "fact" which is also preferred by Burundian EFL learners probably due to transfer from French phrases "en fait"/ "au fait" used in Kirundi-French codeswitching. Another important finding of this study is the fact that the targeted learners still have challenges in the use of connectors. Learners at all levels made errors related to spelling and wrong combination of words as well as syntactic, semantic, and stylistic errors. The errors encountered reveals that the learners targeted in this study have a low level in the use of connectors in particular. These results lead us to formulate a number of recommendations for both teaching and further research. Concerning the teaching of connectors, it should be based on corpus data so that learners have an appropriate context for learning. In this case, examples of connectors should be drawn from authentic language use. Another advantage of using corpus data is that teachers are able to anticipate learners' challenges. Furthermore, in teaching connectors, focus should be on helping learners master a variety of connectors in all categories. Teachers should also strive to give their learners opportunities to use them in communicative tasks. As regards future research, since many studies carried out on the use of connectors by EFL learners have reached contradictory results, more studies should be conducted on as many EFL learner groups as possible to gain more understanding of this aspect of language use. In addition, it has been clear from this research that most research on connectors has been carried out on the advanced level, future researchers should investigate the use of connectors at the intermediate level (i.e., secondary school level).

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