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## Additive and Causal Connectives in GFL Argumentative Writing

The main objective of foreign language learning and teaching is the development of communicative language competence. One of its key components is discourse competence which consists of three main elements: cohesion, coherence and text composition (Bagarić Medve and Pavičić Takač 2013). The development of writing skills is acknowledged as one of the main challenges in foreign language learning and teaching, which includes the appropriate usage of cohesive devices in order to tackle the semantic relationships within a text. In German, explicit cohesive devices refer to coordinating conjunctions, subordinating conjunctions and adverbial connectors. While a bulk of previous research has focused on English as a foreign language, the studies conducted among the learners of German are still scarce. Earlier studies (e.g. Breindl 2016; Vaakanainen and Maijala 2022) pointed to a limited range of variations within the same semantic group and an inappropriate use of connectives when comparing their usage between native speakers and learners of German as a foreign language (GFL). The aim of the present study is to analyse the frequency, variation and errors of causal and additive connectives (coordinating conjunctions, subordinating conjunctions and adverbial connectors) in GFL argumentative writing. The corpus consists of 43 argumentative essays written by Croatian GFL students at B2 level. The findings concerning frequency show that additional connectives are most frequently used within the whole corpus, whereas causal connectives take third place. The additive coordinating conjunction *und* is the most frequent additive item, the subordinating conjunction *weil* is the most frequently used causal item. The results connected to variation point to a wider range in the use of additional connectives in comparison to causal, but also reveal more error recognition within the additive semantic group. The most common types of errors concerning connectors detected in the corpus are as follows: syntax, meaning, spelling/

punctuation, redundancy and register. In order to utilize these research findings aiming at improving the writing skills of GFL students in the learning/instructional process, practical implications are presented at the end.

**Keywords:** causal connectives, additive connectives, coordinating conjunctions, subordinating conjunctions, adverbial connectors

## 1. Introduction

Communicative language competence has remained the main focus of successful foreign language (FL) learning and teaching over the last decades. The development of writing skills as part of discourse competence still seems to be a challenging task in the FL classroom. According to Canale (1983: 9), “unity of a text is achieved through *cohesion* in form and *coherence* in meaning”, so in order to make texts as appropriate as possible, not only the content and grammar need to be considered, but also various usage possibilities regarding cohesive devices must be learned to clearly indicate the correct semantic relationships between sentences, and text sections within a text. The coherence of a text can be ensured through various (explicit and implicit) cohesive devices, such as connectives. Connectives are perceived as complex items since they can have an anaphoric and a cataphoric function at the same time, i.e. linking what has already been said and what will be said (cf. Pon 2022: 3; Kunz and Lapshinova-Koltunski 2014: 237). Every complex linguistic phenomenon can be an additional challenge, especially to FL learners. Connectives as complex linguistic items with multiple usage functions have already been proven to be problematic in the FL learning process (cf. e.g. Thüne 2004; Slavcheva 2018: 85).

So far, studies (e.g. Tankó 2004; Breindl 2016; 2018; Konjevod 2012; Mohammed 2015; Maamuujav et al. 2021; Vaakanainen and Maijala 2022; Pon in press) have tried to investigate different FL contexts (English, German, Hungarian, Turkish, Finnish, Swedish, Arabic, Croatian etc.) and the results in general point to an overuse, underuse and misuse, as well as a limited range of variation of connectives when compared to native speakers’ use of connectives. In order to better understand the use of connectives of GFL learners, and to be able to come to useful pedagogical implications, it seems advisable to first break down this complex target structure into its subgroups and then to analyse the usage of individual items separately. Syntactically, connectives can be divided into coordinating connectives, subordinating connectives and adverbial connectors, whereas semantically the following subgroups have generally been approved: additive, adversative, causal, conclusive, explicative, temporal, conditional, modal, concessive, and final.

The aim of the present study<sup>1</sup> was to analyse the frequency, variation and types of errors in GFL argumentative writing, in a corpus of 43 argumentative essays written by Croatian GFL learners at B2 level.

## 2. Theoretical background

### 2.1. *Connectives in the FL context*

There are different options to create connectivity and to bind parts of a text or proposition together, especially regarding cohesive devices. Both explicit and implicit cohesive devices can serve to express semantic relationships. On the one hand, a connection between different parts of sentences, text sections, or a text in a written composition can be expressed implicitly, i.e. only by making subtle linguistic clues which then lead the reader to make a content-related connection (cf. Breindl 2016: 38). On the other hand, explicit cohesive devices, such as connectives, are used to unveil the relationship between different parts of a sentence, text section, or text through various expressions. Explicit cohesive devices seem to play an important role in establishing cohesion in a written composition, especially within the FL learning context since they can influence the FL learning process and development of appropriate written production through closer examination and exploration of explicit means of connection.

As already mentioned, connectives are explicit cohesive devices that can be classified and systematized in different subgroups, i.e. there are various lists of connectives, e.g. in the Duden-Grammatik (2016) or the Handbuch der Konnektoren (HDK) (cf. HDK-1 = Pasch et al. 2003 and HDK-2 = Breindl et al. 2014). According to Breindl (2016) and Wu and Li (2022) the Duden-Grammatik (2016) offers an expanded list of connectives, whereas, the HDK-1 (2003) and HDK-2 (2014) provide a narrower theoretical version of the individual subgroups.

The analysis of connectives must also be conducted on two different levels, the syntactic and semantic. Following for example HDK-1 (2003), Kunz et al. (2021) and Pon (in press), connectives can be classified into coordinating conjunctions, subordinating conjunctions and adverbial connectors based on their syntactic nature (cf. HDK-1 2003; HDK-2 2014; Pon in press). A clear semantic classification seems to be more difficult, as according to Breindl et al. (2014: 239-251), the semantic categories of subjectivity can be shaped in relation to the relationships of certain facts which can complicate a classification into categories and subcategories and within subcategories, e.g. the additive subgroup (cf. for different classifications in Pasch et

<sup>1</sup> The present study was conducted with the Centre for Linguistic Research at the Faculty of Humanities and Social Sciences in Osijek, as part of the project “Local Coherence in Written Texts in L1 and L2: Contrastive Analysis of the Use of Connectives,” under the direction of Dr. Leonard Pon.

al. (2004: 35) and Breindl (2007: 145)) or the semantic group with causal meaning (cf. Blühdorn (2006: 259-260), Breindl and Walter (2009)).

The present study takes into consideration the semantic classifications outlined in HDK-1 (2003) and HDK-2 (2014) which is mostly based on de Beaugrande and Dressler (1981), but also takes into consideration Duden (2016), Wu and Li (2022) and Pon (in press). The following table presents the eight different semantic classes identified in the present study.

*Table 1:* Semantic categorization of connectives

Meaning	Coordinating Connectives, (for example)	Subordinating connectives (for example)	Adverbial connectors (for example)
<b>additive</b>	und, oder, sowie als/wie auch, wie	wobei	auch, außerdem, daneben, darüber hinaus, ebenfalls, ebenso, erstens, zweitens (als zweites), ferner, weiterhin, weiters, zudem, zusätzlich
<b>adversative</b>	sondern, doch, aber	während, wohingegen	einerseits, andererseits, zum einen
<b>causal</b>	denn	weil, da	deshalb, deswegen, daher, also, so, somit, folglich, darum, dadurch, nämlich
<b>conclusive</b>	-	obwohl, ob	trotzdem, dennoch
<b>explicative</b>	d.h.	insofern (als)	nämlich
<b>temporal</b>		bevor, als, nachdem, wenn	danach
<b>conditional</b>		wenn, falls	dann, sonst
<b>concessive</b>		wenn (...) auch, wenn (...) schon, obwohl	trotzdem
<b>modal</b>		dadurch dass	so
<b>final</b>		damit	dafür

Since connectives represent syntactic-semantic phenomena including complex target structures, not only by form but also by multiple possible meanings, extensive lists can lead to additional confusion and misunderstandings, especially when it comes to presenting such lists to FL learners without any clarification or explicit teaching regarding their appropriate use.

Regarding the present corpus, the Croatian foreign language learning context and the corresponding Croatian GFL curriculum must also be taken into account. In the Croatian learning context, the causal subordinator “because” is introduced very early in GFL instruction (for German as a first and second foreign language in the 7th grade of elementary school), because it is a cognitively and linguistically “simple” subordinator that can be understood, processed, learned, practiced, and automatized by foreign language learners at lower language proficiency levels. According to the Common European Framework of Reference for Languages (CEFR)

(2013: 25), connectors such as *und*, *auch*, and *aber* are also classified as “simple connectors” alongside *weil*. These “simple” connectors are expected to link word groups at the A2 language level.

## 2.2. Previous studies

Previous studies conducted in various foreign language (FL) contexts (English, German, Swedish, Chinese, Croatian), have in general shown an overuse, underuse and misuse, and a limited range of variation in the use of connectors (cf. Milton and Tsang 1993; Bolton et al. 2002; Chen 2006; Mihaljević Djigunović and Vickov 2010; Konjevod 2012; Bagarić Medve and Pavičić Takač 2013; Pon and Kramarić 2018; Pavičić Takač and Vakanjac Ivezić 2019; Pavičić Takač et al. 2020; Maamuujuv et al. 2021; Vaakanainen and Maijala 2022; Bagarić Medve and Karlak 2023 etc.). It has also been noted that additive connectors are most frequently used in GFL texts (Konjevod 2012; Breindl 2016; Pon and Kramarić 2018; Vaakanainen und Maijala 2022; Bagarić Medve and Karlak 2023; Pon in press).

The study conducted by Mihaljević Djigunović and Vickov (2010) investigated the use of discourse markers in written Croatian EFL texts at two different levels: primary (N=100) school students labelled as being A2 level and secondary (N=100) school students who were at B2 level. The EFL students were asked to write a formal letter comprising 400 words. The results show that the coordinating additive conjunction *and* was the most frequently used connective which led to the conclusion of possible L1 transfer and insufficient focus of connectives within the Croatian EFL curriculum.

Konjevod (2012) investigated the use of connectives within a Croatian GFL corpus that was compiled by higher level GFL students who had to write a 400 words biography of a famous person. The results show that temporal, causal, adversative and additive connectives were most frequently used. The additive semantic group was the most frequently used semantic group within the corpus and the coordinating conjunction *und* as the most frequent additive item. She concludes that the results imply “that connectives mostly used by students are those taught at a very low level in foreign language teaching, i.e. *und*, *danach*, *aber*” (Konjevod 2012: 55).

Vaakanainen and Maijala (2022) conducted a research with Finnish native speakers on the use of connectives L3 German and Swedish at A2 level. It is interesting that within the German corpus, in which 357 connectives were detected, the most frequent connectives were *und* (f=137), *weil* (f=37), *wenn* (f=30), *oder* (f=27) and *aber* (f=15).

## 3. Methodology

### 3.1. Research questions and hypotheses

The main aim of the present study is to conduct an analysis on the use of explicit causal and additive connectives (coordinating conjunctions, subordinating conjunctions and adverbial connectors), i.e. to analyse how GFL students use causal and additive connectives when writing argumentative essays, addressing the following research questions:

1. How frequent are explicit causal and additive connectives within the given GFL argumentative corpus, and which of the causal and additive connectives are most frequently used?
2. Is there a difference concerning the frequency and variation between the usage of causal and additive connectives?
3. Is there a difference in the frequency and type of errors that occur in the use of causal and additive connectives?

Taking into consideration the results of previous investigations on the usage of connectives in argumentative texts, the following hypotheses were developed:

H1: It is expected that additive connectives will most frequently occur, especially the coordinating conjunction *und*.

H2: Additive connectives will be more frequently used than causal items, and will show a wider range of items used.

H3: More errors will occur when using additive than causal connections. Moreover, errors connected to syntax will most frequently occur in both semantic groups.

### 3.2. Corpus and methods

The corpus consists of 43 argumentative essays written by GFL students at B2 level<sup>2</sup> in their first GFL Bachelor year programme at the Faculty of Humanities and Social Sciences in Osijek. Before the research was conducted, the participants were informed about the details of the study (scope, duration, target language) and signed

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<sup>2</sup> Since the Croatian catalogue for the Secondary School Leaving Exam, based on the Croatian curriculum for German as a Foreign Language (GFL), assumes that the graduation exam for GFL at the higher level corresponds to the B2 language level of the Common European Framework of Reference (CEFR) for languages and all participants had to pass the Croatian Secondary School Leaving Exam for GFL at the higher level to be enrolled as GFL students, it was assumed that they correspond to B2 level.

an informed consent form. The texts were handwritten, transcribed and coded to ensure participants' anonymity.

The argumentative essays were written on the same two topics (*Life in the city* or *Online shopping*) and participants were asked to write 200-230 words. The instructions for the argumentative essays were as follows:

For some people, online shopping has many advantages. Others see many disadvantages in it. Write an essay on the topic of online shopping. Discuss both the advantages and disadvantages. Write your own opinion and justify it. The essay should be 200 to 230 words long.

For some people, life in the city has many advantages. Others see many disadvantages in it. Write an essay on the topic of life in the city. Discuss both the advantages and disadvantages. Write your own opinion and justify it. The essay should be 200 to 230 words long.

It was decided to adopt these two sets of instruments originally created for the research project *Textual coherence in foreign language writing: Croatian, German, English, French, Hungarian in comparison* (KohPiTekst: IP-2016-06-5736<sup>3</sup>) in order to possibly make the results comparable to the already available results from the KohPiTekst project corpus. The 43 essays were quantitatively analysed by the corpus linguistic tool Sketch Engine. Additional quantitative (manual) and qualitative analyses were required in order to minimize the possibility of not identifying some of the tokens which might have been misused/misspelled or in any other way not detected by the corpus linguistic tool used.

As explained in Chapter 2, there are different possible item lists concerning the two investigated semantic groups, i.e. additive and causal connectives. Following the work of Pasch et al. (2004: 35), Breindl (2007: 145) and Pon (in press) for this study the following items were labelled as additive:

- additive coordinating conjunctions: *und, oder, sowie als/wie auch, wie*
- subordinating conjunction: *wobei*
- adverbial connectors: *auch, außerdem, daneben, darüber hinaus, dazu, des Weiteren, ebenfalls, ebenso, erstens, zweitens (als zweites), ferner, fernerhin, gleichfalls, noch dazu, obendrein, überdies, weiter, weiterhin, weiters, zudem, zusätzlich*

Connected to the causal semantic group the work of Blühdorn (2006: 259ff), Breindl and Walter (2009) and Pon (in press) have been taken into consideration:

<sup>3</sup> <https://coris.hr/projekti/projekt/3386>

- additive coordinating conjunctions: *denn*
- subordinating conjunctions: *weil, da, zumal, umso mehr als*
- adverbial connectors: *deshalb, deswegen, daher, also, so, somit, folglich, darum, dadurch, nämlich*

## 4. Results

Before conducting any further research on the corpus, it was first corpus linguistically investigated and structurally analysed. Table 1 shows general data on the number and average number of words and number and average number of sentences.

Table 2: Structural corpus data

	GFL corpus
Number of words	10 696
Average essay length	249
Minimum words	166
Maximum words	432
Number of sentences	685
Average sentences per text	15.93

Table 2 shows that the average essay length is 249 which is more than the task requested because they were instructed to write 200 to 230 words. It can also be observed that there is a wider individual range when it comes to number of words per essay ranging from 166 to 432.

In order to answer research question one, a frequency analysis of explicit causal and additive connectives was conducted. Table 3 displays the frequencies of all the detected semantic groups of connectives within the corpus:

Table 3: Distribution of different semantic groups of connectives in the whole corpus

Meaning	<i>f</i>	Frequency in %
additive	256	34.45
adversative	114	6.52
causal	103	13.86
conclusive	71	9.56
explicative	57	7.67
temporal	43	5.79
conditional	31	4.17
modal	30	4.04
concessive	21	2.83
final	17	2.29
<b>Total:</b>	<b>743</b>	



As shown in Table 3 the total number of connective tokens in the corpus is 743 tokens. Additive connectives (f=256) are the most frequently used semantic group of connectives followed by adversative (f=114), causal (f=103), conclusive (f=71), explicative (f=57), temporal (f=43), conditional (f=31), modal (f=30), concessive (f=21), and final (f=17) as the least frequently used semantic type within this GFL corpus.

In order to be able to give data on the different items with causal and additive meaning used within the corpus, these two specific groups were further quantitatively and qualitatively analysed. Table 4 displays the types and frequencies of additive connectives:

Table 4: Types and frequencies of additive connectives found in the corpus

Type of connective	Additive item	f	Frequency share within the additive connectives in %	Frequency share within the whole corpus in %
<b>Coordinating conjunctions</b>	und	98	38.28	13.19
	oder	17	6.64	2.29
	nicht nur...sondern auch	1	0.39	0.13
<b>Subordinating conjunctions</b>	-	-	-	-
<b>Adverbial connectors</b>	auch	91	35.54	12.25
	außerdem	10	3.91	1.35
	außer dass	1	0.39	0.13
	besonders	5	1.95	0.67
	dazu	3	1.17	0.4
	erstens ...	1	0.39	0.13
	zweitens (als zweites)	2	0.78	0.27
	noch (dazu)	22	8.59	2.96
	vor allem	1	0.39	0.13
	weiterhin	1	0.39	0.13
	zuletzt	1	0.39	0.13
	zusätzlich	2	0.78	0.27
	<b>Total:</b>	15	256	

As can be extracted from Table 4, the most frequently used additive connective is the coordinating conjunction *und* (f=98) tightly followed by the adverbial connector *auch* (f=91). Other connectives were used as follows: *noch (dazu)* (f=22); *oder* (f=17); *außerdem* (f=10); *besonders* (f=5); *dazu* (f=3); *zweitens (als zweites)* (f=2); *zusätzlich* (f=2); *nicht nur ... sondern auch* (f=1); *außer dass* (f=1); *erstens* (f=1); *vor allem* (f=1); *weiterhin* (f=1); *zuletzt* (f=1).

The results presented in Table 5 show the analysis for the corpus connected to the types and frequencies of the causal connectives used.

Table 5: Types and frequencies of causal connectives found in the corpus

Type of connective	Causal item	<i>f</i>	Frequency share within the causal connectives in %	Frequency share within the whole corpus in %
<b>Coordinating conjunctions</b>	denn	5	4.85	0.67
<b>Subordinating conjunctions</b>	weil	67	65.05	9.02
	da	2	1.94	0.27
<b>Adverbial connectors</b>	deswegen	21	20.39	2.83
	deshalb	8	7.77	1.08
<b>Total:</b>	5	103		

According to Table 5 the most frequently used causal connective is the subordinating conjunction *weil* ( $f=67$ ) followed in frequency by the adverbial connector *deswegen* ( $f=21$ ). The adverbial connector *deshalb* ( $f=8$ ) is the third frequently used followed by the coordinating conjunction *denn* ( $f=5$ ), and the least frequently used is the causal subordinating conjunction *da* ( $f=2$ ).

Concerning research question two investigating the difference in the frequency and variation between the usage of causal and additive connectives, the following observations have been made. As shown in Table 4 only two explicit additive cohesive devices (coordinating conjunctions and adverbial connectors) were used in the GFL argumentative writing differing in frequency. The following 15 different additive connectives could be labelled: three coordinating conjunctions (*und*  $f=98$ ; *oder*  $f=17$ ; *nicht nur ... sondern auch*  $f=1$ ) and 12 different adverbial connectors (*auch*  $f=91$ ; *außerdem*  $f=10$ ; *außer dass*  $f=1$ ; *besonders*  $f=5$ ; *dazu*  $f=3$ ; *erstens*  $f=1$ ; *zweitens (als zweites)*  $f=2$ ; *noch (dazu)*  $f=22$ ; *vor allem*  $f=1$ ; *weiterhin*  $f=1$ ; *zuletzt*  $f=1$ ; *zusätzlich*  $f=2$ ). A total of 256 tokens within the GFL corpus, identifiable as additive connectives, were detected. The individual differences in the usage of additive connectives in the GFL texts range from 1 to 13 tokens per text.

As shown in Table 5 all three explicit causal cohesive devices (conjunctions, subordinating conjunctions, adverbial connectors) were used in FL argumentative writing differing in frequency. Five different causal connectives have been detected as well: one coordinating conjunction (*denn*  $f=5$ ), two types of subordinating conjunctions (*weil*  $f=67$ ; *da*  $f=2$ ) and two different adverbial connectors (*deswegen*  $f=21$ ; *deshalb*  $f=8$ ). A total of 103 tokens was identified. The individual differences in the usage of causal connectives in GFL range from 0 to 7 tokens per text.

Table 4 and 5 also give insights into the difference between the used causal and additive connectives concerning the variation of different connective devices which is especially shown in the variation between adverbial connectors. Twelve different adverbial connectors with additive semantic function (*auch*, *außerdem*, *dazu*, *erstens (als erstes)*, *zweitens*, *noch (dazu)*, *weiterhin*, *zusätzlich*, *besonders*, *dazu auch*,

*zuletzt, vor allem, außer dass*) varying in frequency were identified, whereas only two different causal adverbial connectors (*deswegen* and *deshalb*) were used. When it comes to subordinating connectives, two causal subordinating conjunctions (*weil* und *da*) were used, whereas not even a single subordinating conjunction was detected, i.e. the only possible additive subordinating conjunction (*wobei*) could not be found within the texts. It should be emphasized that the subordinating conjunction *da* was used only in two instances and only by the same participant. Three different coordinating conjunctions with additive meaning (*und, oder, nicht nur ... sondern auch*) and only one with causal meaning (*denn*) occur within the corpus.

The third research question addresses the differences in the frequency and type of error that occur in the use of causal and additive connectives in GFL argumentative writing. Table 6 shows the results from the qualitative analysis concerning the frequency of errors:

Table 6: Error frequencies per connective item

Meaning	<i>f</i>	Total of items	Frequency share within the same semantic group in %	Frequency share of errors within the whole corpus in %
<b>additive</b>	33	256	12.89	35.48
<b>adversative</b>	15	114	13.16	16.13
<b>causal</b>	7	103	6.8	7.53
<b>conclusive</b>	6	71	8.45	6.45
<b>explicative</b>	13	57	22.81	13.98
<b>temporal</b>	7	43	16.28	7.53
<b>conditional</b>	3	31	9.68	3.23
<b>modal</b>	2	30	6.67	2.15
<b>concessive</b>	4	21	19.05	4.30
<b>final</b>	3	17	17.65	3.23
<b>Total</b>	93	743		

Table 6 shows that errors were made in 12.89% of the cases when using connectives with additive meaning which makes a frequency share of errors of 35.48% within the whole corpus. On the other hand, there were not many errors detected connected to causal connectives since the frequency share of errors within the same semantic group of causal connectives is only 6.8% and the frequency share of errors connected to causal connectives within the whole corpus is only 7.53%.

In order to better understand and to be able to give pedagogical implications, the errors were further qualitatively analysed and classified according to the error types:

Table 7: Error types and frequencies for causal and additive connectives

Error type	Causal connectives (f)	Frequency share within the same semantic group in %	Additive connectives (f)	Frequency share within the same semantic group in %
Syntax	3	40	12	30.77
Meaning	1	20	6	15.38
Spelling/punctuation	2	20	11	28.21
Redundancy	1	20	7	17.95
Register	-	-	3	7.69
Total:	7		39 <sup>4</sup>	

Table 7 shows errors were made with additive connectives concerning syntax (f=12), spelling/punctuation (f=11), redundancy (f=7), meaning (f=6), and register (f=3). When it comes to causal connectives, errors occurred only connected to syntax (f=3), spelling/punctuation (f=2) meaning (f=1), and redundancy (f=1), there were no errors connected to register. We can conclude that the most frequently made type of error for both semantic groups are syntactical errors but with a difference in frequency, i.e. more errors were made with additive (additive f=12) than with causal connectives (f=3). It is also interesting to observe that minimum errors were made connected to register when using additive and causal connectives, but with different frequencies: causal connectives (f=0) and additive connectives (f=3).

The following examples show errors that have been qualitatively detected occurring within the additive and causal semantic subgroup:

Syntax:

- (1) *\*Auch, weil so viele Menschen in der Stadt leben und fahren, gibt es sehr oft Stau und nicht so selten Autounfälle.* (nj114<sup>5</sup>) (additive, syntactically not appropriately integrated)
- (2) *\*Deshalb, wenn man in ein großes Einkaufszentrum gehen will, muss man entweder mit dem Auto, dem Bus, oder mit dem Zug fahren.* (nj22) (causal, not appropriately integrated into the sentence)

Meaning:

- (3) *\*Noch können sie Unfälle ausrichten, die tödlich werden können.* (nj5) (additive, *noch* instead of *darüber hinaus*)

<sup>4</sup> The number of total errors in Table 6 (additive connectives) differs from the total in Table 7, because Table 7 displays the number of connectives that were incorrectly used, and Table 6 shows all errors made using a connective item, i.e. sometimes more than one error connected to a certain connective (e.g. syntax + spelling)

<sup>5</sup> In order to guarantee anonymity, the essays were labelled with different codes, e.g. nj114, nj 22, nj112, nj182, etc.

(4) *In der Stadt viele Leute haben eine Chance, ein gutes Leben zu bauen, \*deswegen müssen sie auch viel arbeiten und auch schaffen wollen.* (nj18) (causal, *deswegen* should be replaced by e.g. *dafür* expressing final meaning)

Spelling/punctuation:

(5) *\*Außer das\*, shoppe ich manchmal online, und manchmal gehe ich persönlich (vor allem wenn ich etwas sehr wichtig zu einkaufen habe).* (nj182) (additive) (spelling + punctuation)

(6) *\*Auserdem, gibt es überall viele Leute und deswegen ist es nie echt ruhig.* (nj112) (causal) (spelling + punctuation)

Redundancy:

(7) *Weil Leute alles schicken \*und manchmal sind die sachen nich gleich wie auf dem Foto oder bekommen sie etwas anderes.* (nj112) (additive)

(8) *Heute ist das wichtigste das ein Mensch eine gute Arbeit hat und das er genügend Geld fürs Leben hat und \*deswegen gehn meistens die Menschen in die Stadt, weil die Stadt mehr Möglichkeiten bietet.* (nj117) (causal)

Register:

(9) *\*Und Jugendliche können ausgehen wo sie wollten.* (nj114) (additive, a written sentence cannot start with *und*, typical for oral conversation)

## 5. Discussion

Regarding the first research question, i.e. the frequency of explicit causal and additive connectives within the given GFL argumentative corpus, and the most frequently used causal and additive connectives, the results presented in Chapter 4 reveal that additive connectives were most frequently used within the given GFL corpus, followed by adversative connectives and causal connectives which confirms hypothesis one. When it comes to the single additive and causal items, it is particularly interesting that the results show that the additive coordinating conjunction *und* and the causal subordinating conjunction *weil* were most frequently detected within the semantic groups making up different shares within the whole corpus (*und*  $f=98$ ; 13.16%; *weil*  $f=67$ , 9.02%) which is also in line with the second part of the first hypothesis. These results go also in line with other similar studies (e.g. Breindl 2016; Pon in press; Mihaljević Djigunović and Vickov 2010; Konjevod 2012; Vaakanainen and Maijala 2022). According to Breindl (2016: 59) FL learners tend to use semantically inconspicuous, neutral connectors, such as *und*, *aber*, *weil*, and *wegen*, as they also have a wide range of possible usages. According to the CEFR (2013: 25), along with *weil*, connectives such as *und*, *auch*, and *aber* are classified as “simple

connectives". These "simple" connectives are used to link word groups expected at the A2 proficiency level. Taking into consideration that the corpus was designed with texts written by participants who are at B2 level (cf. Chapter 3.2), it is interesting that the most frequently used connectives are connectives that are in relation to a lower proficiency level than it would be expected.

Moreover, since the corpus was selected within the Croatian FL learning context, the corresponding Croatian GFL curriculum must also be considered. The additive coordinating connective *und*, but also the causal subordinating conjunction *weil* are introduced very early in GFL curricula (both in early GFL classes in primary school), as they are considered to be cognitively and linguistically not complex connectives that can easily be processed by FL learners at lower language proficiency levels.

The less frequent connectives are those with concessive and final meaning, as well as, with modal and conditional meaning, which can be due to two different reasons. The first one might be the sort of text, i.e. argumentative essay comprising only 200 to 230 words, because the length of the text and the composition of the task itself (cf. Chapter 3.2) limit a possible more intensive use of the above-mentioned semantic groups. The second reason falls together with the already mentioned reasons for the use of *und*, *aber* and *weil*, i.e. participants preferred using safe, well-known, probably internally already automatized items in order to express certain semantic relationships.

Concerning the second research question on the difference connected to frequency and variation between the usage of causal and additive connectives, the results in Chapter 4, as already mentioned above, show a general tendency of connectives with additive meaning to be used more frequently than causal items, and also show a wider range of items. Both findings are very much in line with the second hypothesis.

Additive connectives display 15 different items with different frequencies (cf. Table 4), whereas only 5 different items were used to express causal meaning (cf. Table 5). It has to be emphasized that the 15 different connective items vary significantly in frequency from 1 to 98 (cf. Table 4), so the most frequently detected additive connectives (e.g. *und* f=98, *auch* f=91, *oder* f=17, *noch (dazu)* f=22; *außerdem* f=10; *besonders*=5) make up 32.04% within the whole corpus, whereas the causal items in total only 13.87%. Nevertheless, it has been observed that, although even 15 different additive items were identified, specific additive connectives, the most frequently used coordinating conjunction *und* and the second frequent additive adverbial connector *auch*, but also the most frequent causal subjunctive *weil* tend to be overused. These findings are in line with other findings stating that FL learners tend to repeat the same expressions instead of varying them (cf. e.g. Konjevod 2012; Anwardeen

et al. 2013; Vaakanainen und Maijala 2022; Bagarić Medve and Karlak 2023). In a comparative study Bagarić Medve and Karlak (2023) showed that the Croatian subjunctive connective *jer* (German: *weil*) is most commonly used in Croatian L1 essays, followed by *i*, which corresponds to the German coordinating conjunction *und*, and *ali* (German: *aber*). These results may suggest a possible transfer from the L1. Instances of possible L1 transfer has also been described in the study conducted by Mihaljević Djigunović and Vickov (2010) describing possible reasons for the overuse of *and* in their corpus. A similar usage pattern was observed in other Slavic languages, which could also indicate a typological transfer. In addition, globalisation and the influence of oral discourse are also possible reasons for such a frequency distribution showing that the lack of writing experience may also be apparent.

In addition, there is an observation that has to be mentioned, as it was observed within other studies (Breindl 2006; Bagarić Medve and Karlak 2023; Karlak and Šarić Šokčević in press), and it is connected to the overuse of the causal subjunctive *weil* compared to *da*. Only two instances of *da* have been detected in the present corpus, used in the same argumentative essay. When comparing these results to Breindl's study (2016), it is particularly notable that the German native-speakers preferred the causal conjunction *da* over *weil* in their argumentative texts. Bagarić Medve and Karlak (2023) conclude from similar observations in their study that certain linguistic and cultural features of Croatian could provide a possible explanation for the excessive use of *weil* by GFL students, especially since this coordinating connective is the most commonly used in texts in both languages (Croatian as L1 and German as L2) within their corpus. Nevertheless, taking into consideration the specific syntactic use of *da* when compared to *weil*, it seems that the needed inversion when using *da* is one of the most likely reasons which has to be further investigated in the light of possible difficulties with the participants' interlanguage system.

Regarding the third research question, which deals with the difference in the frequency and type of errors that occur in the use of causal and additive connectives, the results in Chapter 4 confirm the third hypothesis stating that more errors will occur when using additive than causal connections and errors connected to syntax will most frequently occur in both semantic groups.

Connected to the error frequency it has to be noted that errors more frequently occur with connectives with additive meaning ( $f=39$ ) when compared to connectives with causal meaning ( $f=7$ ) which was expected since more connectives with additive meaning were used, but, nevertheless, the frequency share of errors when comparing the errors per item to the errors made through the whole corpus is 34.38% for connectives with additional meaning, and with connectives with causal meaning only 5.21%, which seems to be marginal within the present corpus.

The types of errors can generally be categorized as follows: syntax, meaning, spelling/punctuation, redundancy and register. The most frequently made errors are connected to the syntactic use of the connectives for both semantic groups (additive  $f=12$ , causal  $f=3$ ). It is also interesting to observe that not all errors are connected to the functional use of the connectives but rather to the grammatical interlanguage system, i.e. those errors connected to spelling/punctuation (e.g. omission and/or duplication of letters, omission of the comma before the subordinating conjunction etc.). The amount of errors connected to syntax, meaning, redundancy and register ( $f=28$ ) shows that there seems to be a need for further FL implicit and explicit instruction focusing on the use of connectives in argumentative essays including the above-mentioned categories, in order to try to prevent functional errors in these fields in the future. Obviously, especially in regard to connectives with additive additional meaning the functional use of this semantic group seems to remain unclear to some GFL learners.

## 6. Conclusion

Based on the presented findings in relation to the frequency, variation and type of errors of connectives (coordinating conjunctions, subordinating conjunctions and adverbial connectors) with causal and additive meaning in GFL argumentative writing, it can be concluded that connectives with additive meaning are most frequently used within the presented GFL corpus, causal connectives being in third place. The additive coordinating conjunction *und* is the most frequent additive and the subordinating conjunction *weil* the most frequent causal item. The findings connected to variation show that there is a wider range in the use of connectives with additive than causal meaning, but also more errors are made within the additive semantic group. The most common types of errors with connectives are as follows: syntactical errors, errors connected to meaning, spelling/punctuation, form, redundancy and register. In addition, it must be noted that there are individual differences in the frequency and variation of especially connectives with additive meaning, indicating a heterogeneous corpus in terms of language proficiency. The variation and some types of errors that occurred indicate that GFL students, who were tested for and confirmed being B2 level, should be taken into consideration for further curriculum changes connected to FL teaching of connectives since the variation and some types of errors that occurred indicate that this proficiency level cannot be attributed to all dimensions of communicative competence, especially discourse competence.

There is a need for further systematic and methodologically aligned studies, especially focusing on contrastive methodological designs in order to further shed light and try to clarify the use of connectives in FL learning contexts. Additionally, further research is needed to explore in which language (multilingual) GFL learners



receive the most useful input regarding the use of connectives and to what extent transfer from the L1 or other foreign languages (especially English as an L2/L3) may play a role. That is why future studies should be longitudinally designed focussing on a smaller number of participants in order to capture the development of writing skills in multilingual GFL learners and an array of possible contextual influences that shape this development over time. One such study is for example the mixed-methods longitudinal case study by Kobayashi and Rinnert (2013) that used multiple data sources, both elicited and naturally occurring, including argumentation essays written in three languages, retrospective stimulated recall of pausing behavior, interviews, and natural observations. The results suggest “that partially overlapping theories of multicompetence, genre, and identity can help elucidate the unique character of multilingual writers” (Kobayashi and Rinnert 2013: 4).

As already mentioned, in the light of pedagogical implications it also has to be emphasized that there is a need for more writing activities in the GFL classroom context to try to explicitly and implicitly instruct students on the use of connectives contributing to expanding the range and appropriateness of certain connectives. These guided and systematic writing opportunities should include all educational levels, from primary school to university level, explicitly and implicitly contrasting connectives in order for the learners to be given the chance to develop meta-linguistic awareness regarding the use of connectives in their native and foreign languages.

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## ADITIVNI I KAUZALNI KONEKTORI U RASPRAVLJAČKIM ESEJIMA NA NJEMAČKOM KAO STRANOM JEZIKU

Glavni je cilj učenja i poučavanja stranoga jezika razvoj komunikacijske jezične kompetencije. Jedna je od njezinih ključnih komponenti diskursna kompetencija koja se sastoji od tri glavna elementa: kohezije, koherencije i kompozicije teksta (Pavičić Tačač i Bagarić Medve 2013). Razvoj vještine pisanja stoga predstavlja jedan od glavnih izazova u učenju i poučavanju stranog jezika, što uključuje primjerenu uporabu kohezivnih sredstava kako bi se izrazile semantičke veze unutar teksta. U njemačkom se jeziku eksplicitna kohezivna sredstva odnose se na konjunktore, subjunktore i vezne priloge. Budući da je većina dosadašnjih istraživanja usmjerena na engleski kao strani jezik, studije koje obuhvaćaju učenike njemačkog kao stranog jezika još uvijek su rijetke. Prethodna istraživanja (npr. Breindl 2016; Vaakanainen and Maijala 2022) ukazuju na ograničen raspon varijacija unutar iste značenjske skupine i neprimjerenu uporabu veznika pri usporedbi njihove upotrebe između izvornih govornika i učenika njemačkog jezika kao stranog jezika. Stoga je cilj ovoga istraživanja analizirati učestalost, varijaciju i pogreške pri uporabi aditivnih i kauzalnih veznika (konjunktora, subjunktora i veznih priloga) u raspravljajkim esejima napisanim na njemačkom kao stranom jeziku. Korpus čine 43 raspravljajka eseja koja su pisali hrvatski studenti njemačkog kao stranog jezika na razini B2. Rezultati pokazuju da su u korpusu najviše zastupljeni aditivni veznici, dok kauzalni zauzimaju treće mjesto. Konjunktore *und* je pritom najčešći aditivni konektor, dok je subjunktore *weil* najčešće korišten kauzalni konektor. Rezultati s obzirom na varijaciju pokazuju da studenti koriste širi raspon aditivnih konektora u odnosu na kauzalne te s tim u skladu čine i više pogrešaka unutar aditivne značenjske skupine. Najčešći tipovi pogrešaka pri uporabi konektora zastupljenih u korpusu odnose se na sintaksu, značenje, pravopis/interpunkciju, oblik, redundanciju i registar. Na kraju rada prikazuju se praktične implikacije rezultata istraživanja kako bi se dobivene spoznaje mogle primijeniti u svrhu unaprjeđenja vještine pisanja u učenju/poučavanju njemačkog kao stranog jezika.

**Ključne riječi:** aditivni veznici, kauzalni veznici, konjunktore, subjunktore, vezni priloci

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