Abstract. Over the last decade, there has been an increased interest in analysing writing skills of students studying English as a Foreign Language both at secondary and tertiary level, including the essay writing skills of non-language students. The aim of the present study is to analyse the types of errors in the use of linking words and phrases in student examination essays in a tertiary level academic writing course and state the probable causes of these errors. The research method is a case study. The empirical research is based on Corder’s (1967), Reid’s (1998, mentioned in Yates and Kenkel, 2002) and Ngadda and Nwoke’s (2014) theories on the classification of errors and Biber et al.’s (2002) classification of linking adverbials as well as presents the frequency of the types of errors. The research object is academic illustration essays of 18 students studying in Latvia. The main findings of the research indicate that proficient users of a language tend to use linking words and phrases appropriately. The main type of errors found in the essays is intralingual errors caused by faulty learning or teaching, forgetfulness or overexposure to informal use of the target language.

Key words: linking words and phrases, error analysis, intralingual error, academic essay, register, tertiary level

INTRODUCTION

The use of connectors has been in the centre of research interest recently. It has been studied in editorials (Kim and Ahn, 2012), native speakers’ and language learners’ produced texts (e.g. Bikeliene, 2013; Vincela, 2013), and more specifically, also in academic essays (e.g. Januliene and Dziedravicius, 2015; Don and Sriniwass, 2017). The research interest has been determined by the increased number of study programmes offered in English. Moreover, the labour market requires professionals of different fields who could communicate in writing in English because multinational and international enterprises become more common in the global market.

At C1 level, students as proficient users should demonstrate ‘controlled use of organisational patterns, connectors and cohesive devices’ as well as ‘consistent and helpful’ use of punctuation marks in their essays (Common European Framework of Reference for Languages, n.d.: 24).
Research (e.g. Henry and Roseberry, 2007; Heydari and Bagheri, 2012; Ngadda and Nwoke, 2014; Phuket and Othman, 2015) shows that L2 (second language) and EFL (English as a Foreign Language) learners commit both intralingual and interlingual errors in their written texts. Learners’ errors, their number and classification have also been of continuous interest since 1967 when Corder published his paper ‘The significance of learner’s errors’.

Plakans and Gebril (2017: 98) have researched TOEFEL essays for ‘type and appropriateness of organization and coherence quality’ and concluded that ‘the cohesion markers analyzed in their study yielded no statistical differences across the score levels’. ‘[…] Crossley and McNamara (2012) found that more advanced L2 writers use fewer cohesive devices’ (mentioned in Plakans and Gebril, 2017: 109). ‘Research has suggested that many cohesion devices decrease with level of text complexity because higher level texts have more inferred, rather than explicit, cohesion (Graesser et al., 2004)’ (in Plakans and Gebril, 2017: 109). This observation correlates with the one made by Ngadda and Nwoke’s (2014: 13) research. However, other research demonstrates that linking adverbials are frequently used in research articles in different disciplines (Peacock, 2010) and editorials (Kim and Ahn, 2012).

A number of studies emphasize the quantitative aspect of errors in student writing, which has been criticised by di Gennaro (2016). She has elaborated the criteria for the assessment of student writing by separating cohesive from rhetorical control. According to di Gennaro, the main characteristics of cohesive control are:

[I]deas are overtly linked throughout the essay. Use of cohesive devices (logical connectors, repetition, synonyms) is always accurate. Compound and complex sentences are used accurately to create clear connections across sentences and paragraphs. (2016: 13)

She has emphasized that ‘the use of automated essay scoring programs, which also reduce writing to observable and measurable units, has been met with widespread criticism and resistance by composition and writing assessment scholars precisely for this reason (cf. Condon, 2013)’ (ibid.: 2). Thus, she emphasizes the need for contextual treatment of errors instead of mere quantitative approach.

Therefore, the research method chosen for the present paper is a case study. The paper aims at analysing the types of errors in the use of linking words and phrases in student examination essays in a tertiary level academic writing course and stating the probable causes of the errors, irrespective of the total number of errors found in the analysed essays.

During the research the following research questions were posed:

1. What linking words and phrases (LWPs) do students use in illustration essays?
2. What type of errors do students commit when using LWPs and what are the probable causes of these errors?
The appropriate use of particular linking words depends on the organization of the essay. There are several classifications available, for example, Oshima and Hogue (2006) distinguish four patterns of essay organization: chronological order, logical division of ideas, comparison and contrast, and cause and effect. Anker (2009) presents narration, illustration, description, process, classification, cause and effect, comparison and contrast, and argument essays. Fawset (2018) mentions illustration, classification, narration, persuasion, description, process, cause and effect essays. Considering the LWPs these authors recommend to be used in each type of essays and organizational patterns, it can be observed that the same groups of linking adverbials are common for several essay types and organizational patterns, for example, to illustrate, to persuade and to argue enumeration linking adverbials (Biber et al., 2002) are used, and all essays are recommended to be finished with the summation LWPs. In the present case study, we will look only at the illustration essays and the LWPs used in them. According to Sprangler and Werner (1986: 111), an illustration essay provides specific, interesting and concrete examples to support a general statement, and examples ‘represent the chief characteristics of the class’.

To attain the research aim, the paper starts with presenting the notion of error and the classification of errors and their probable causes in language learners’ texts, then clarifies how and why we use the term ‘linking words and phrases’ before presenting the results of the empirical study.

THE NOTION OF AN ERROR

Already 50 years ago, Corder (1967: 161) stated that learners’ errors need to be analysed because they provide significant information to the researcher about the language acquisition process, to the teacher – ‘how far towards the goal the learner has progressed’, and the learner can also learn from them. He emphasized the difference between systematic and non-systematic errors as even native speakers in normal everyday speech commit both types due to ‘memory lapses, physical states, such as tiredness and psychological conditions such as strong emotion’ (Corder, 1967: 166). In this case, speakers immediately realize they have made an error. Corder mentioned that the same reasons also affected a second language learner’s errors. Therefore, Corder (1967: 166–167) introduced the term the error of performance for unsystematic errors and the error of competence for systematic errors, which indicates insufficiencies in the learner’s knowledge about the correct language use. Corder suggested differentiating them into mistakes and errors respectively.

Richards and Schmidt (2010: 201) define an error as ‘the use of a linguistic item (e.g., a word, a grammatical item, a speech act, etc.) in a way which a fluent or native speaker of the language regards as showing faulty or incomplete learning’. Richards (1971) distinguishes three sources of errors: interference errors (based on the impact of the rules of the native language while speaking or writing in
another), intralingual errors (occurring due to faulty learning and application of language rules) and developmental errors (occurring due to the learner’s limited experience with the target language).

The classification of errors has been addressed a lot since then, for example, by Richards (1974), Schacheter and Celce-Murcia (1977), Brown (1980), James (1998) and in some more recent empirical studies, by Heydari and Bagheri (2012), Ngadda and Nwoke (2014); however, most of them apply Richards’ distinction between interlingual and intralingual errors. Yates and Kenkel (2002: 29) refer to Reid (1998) who admits that ‘student errors in writing reflect the student’s underlying system’ and mentions the following causes for writing errors: ‘1) first language interference; 2) overgeneralization of English language rules, 3) high level of difficulty of the language structure, 4) production errors (which are labelled “mistakes”).’

Ngadda and Nwoke (2014: 13) in their research of texts written by undergraduate engineering students state that the basic causes of errors in novice writers’ papers are: ‘(i) Interlingual difficulties, (ii) Intralingual difficulties, (iii) Lack of exposure to the target language, (iv) Faulty teaching and learning, (v) Forgetfulness.’

Their research also indicates that errors in the use of connectives appear to be the least frequent ones.

Heydari and Bagheri (2012: 1588) conclude that ‘as learners progress in acquiring the norms of the target language, more and more intralingual errors are manifested’.

**THE NOTION OF LINKING WORDS**

There are different ways how to name and classify text linkers. According to Swales and Feak (1994: 22), ‘[l]inking words and phrases can help a writer to maintain flow and establish relationships between ideas’. Their taxonomy of linking words is based on ‘their function and grammatical use’ (ibid.). Swales and Feak (ibid.) distinguish: subordinators (e.g. although, even though, because), sentence connectors (e.g. furthermore, in addition, moreover) and phrase linkers (e.g. in addition to, despite, in spite of).

Biber et al. (2002: 356) distinguish linking adverbials (LAs) that perform a connecting function, showing ‘the relationship between two units of discourse’, which may be sentences, units larger than a sentence and also units smaller than a sentence.

Chalker (1996: 1) mentions two types of ‘grammatical ways of joining clauses’ – by using co-ordinating and subordinating conjunctions and connectors. If a conjunction ‘normally combines two (or more) clauses into one sentence’ and is part of a clause (ibid.: 2), a connector refers to ‘the preceding sentence’ and thus ‘does not grammatically belong so closely to its clause’ (ibid.: 3).
Those linguists who use the term *discourse markers* may distinguish: overall meta-discourse markers, partial meta-discourse markers and inter-sentential markers emphasizing that even a clause (e.g. a thesis statement) may function as a discourse marker (Kobayashi and Rinnert, 2008: 13).

Oshima and Hogue (2006: 27) use the terms: transition signals: transition phrases (e.g. in addition, on the other hand, in contrast), conjunctive adverbs (furthermore, moreover, still, otherwise), coordinating conjunctions (and, but, yet), subordinating conjunctions (although, though, if), others (another (+ noun), an additional (+ noun), in spite of (+ noun), despite (+ noun).

Other scholars also mention three groups of linking words: ‘(a) coordinating conjunctions, (b) subordinating conjunctions, (c) linking adverbs’ (Leech, 1989: 241).

Bikeliene (2013) mainly uses the term *linking words* when describing the research on the use of ‘moreover, in addition, also, besides, furthermore, what is more’ in a subcorpus of Lithuanian learners of English and several British corpuses, but she also refers to them as ‘connectors’ at the beginning of the paper.

As the discussion above reveals, borderlines between different groups of linkers are blurred; therefore, the term *linking words and phrases* (LWPs) will be used as an umbrella term in the analysis of the selected tertiary level academic essays.

## REGISTER

Not to break the unity of a written text, the selected linking words and phrases should match the register of the written text. However, only a few scholars indicate the differences in register, mentioning which linking words are more formal or informal than the rest of the words. Moreover, the lists are not complete, and not all course books on academic writing consistently reveal the difference in register, for example, only some information is available in Oshima and Hogue’s (2006) book. Therefore, we have made an attempt to create a more comprehensive list, combining information from available sources. Table 1 presents a list of common linking words and phrases that, according to several researchers (Leech, 1989; Chalker, 1996; Biber et al., 2002; Oshima and Hogue, 2006; Carter and McCarthy, 2006), would be found in either formal or informal register.

The information from the table will be used in further research to check whether research participants commit register errors when writing an academic essay.

## METHOD AND MATERIALS

The corpus of the present research comprises 18 illustration essays (7000 words in total) – 12 written by local students and 6 written by international students.
Table 1. Common linking words and phrases used in formal and informal register (modified from Leech, 1989; Chalker, 1996; Biber et al., 2002; Oshima and Hogue, 2006; Carter and McCarthy, 2006)

<table>
<thead>
<tr>
<th>Formal</th>
<th>Informal</th>
</tr>
</thead>
<tbody>
<tr>
<td>accordingly, albeit (rare), although, as a consequence, as a result of, because (of), consequently, despite (the fact that), duly, e.g., even though, first, finally, for example, for fear that, for instance, further(more), hence, hitherto, however, i.e., in addition (to), in order that, in that, insofar as (in so far as), in spite of, in the event, in order that, in other words, lest, moreover, nevertheless, nonetheless, on the contrary, on the other hand, on top of that, rather, simultaneously, so, that is, then, therefore, though, thus, to conclude, to summarise, to the extent that, whereas, whether, with reference to, who(m), yet</td>
<td>all the same, and, anyway, as I say, because of that, but, in the end, or, so (without ‘that’), so then, still, such (without ‘that’), that (referring to people), though, what’s more</td>
</tr>
</tbody>
</table>

coming from Italy (3 students), France (1 student), Russia (1 student) and Nigeria (1 student). The small size of the research object is explained by the fact that only illustration essays were selected for the analysis as this type dominated among the examination essays and was also selected by the international students. Language learner groups in the chosen study programme and university are small (30–40 students per year) because students pay the tuition fee as opposed to many other study programmes where state funded budget places are available.

The local students have studied essay writing in both their native language and English as a foreign language, so they are already supposed to have C1 level knowledge on essay writing even before starting the tertiary level course. The international students have various background knowledge on writing academic essays in English. However, at the end of the course the knowledge level should be the same for all students; thus, the results are supposed to be comparable. The analysed essay was written as an examination essay at the end of a university course in academic writing.

The research was a case study. To attain the research aim, that is, to analyse the types of errors in the use of linking words and phrases in student examination essays in a tertiary level academic writing course and state their probable causes, the above discussed conclusions on the types of errors (interlingual or intralingual) and their probable causes as suggested by Corder (1967), Reid (1998, mentioned in Yates and Kenkel, 2002) and Ngadda and Nwoke (2014) were considered and compared. In addition, Biber et al.’s (2002) classification of LAs was applied to state whether the LWP used by students belong to the ones that appear in illustration essays (see Table 2).
**Table 2. Typical linking adverbials for enumeration, addition and summation**
(based on Biber et al., 2002: 389–391)

<table>
<thead>
<tr>
<th>Semantic categories</th>
<th>Use</th>
<th>Linking adverbials</th>
</tr>
</thead>
<tbody>
<tr>
<td>enumeration and addition</td>
<td>(a) ‘to enumerate (list) pieces of information’ [p. 389]</td>
<td>(a) first(ly), second(ly), thirdly, finally, lastly, in the first/second place, first of all, for one thing … for another, to begin with, next</td>
</tr>
<tr>
<td></td>
<td>(b) ‘to signal the addition of items to a list’ [p. 389]</td>
<td>(b) in addition, similarly, also, by the same token, further, furthermore, likewise, moreover</td>
</tr>
<tr>
<td>summation</td>
<td>to indicate ‘that a unit of discourse concludes or sums up points made in the preceding discourse’ [p. 389]</td>
<td>in sum, to conclude, all in all, in conclusion, overall, to summarise.</td>
</tr>
</tbody>
</table>

The samples from students’ essays provided in the next section of the paper will not be edited.

**RESULTS AND DISCUSSION**

As no significant differences in the misuse of LWPs by local and international students were found, all 18 essays will be analysed together.

**Table 3. Linking words and phrases used in the essays**

<table>
<thead>
<tr>
<th>Semantic category</th>
<th>LWP</th>
<th>No. of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enumeration and addition</td>
<td>first, firstly, first of all, in the first place, second, secondly, third, thirdly, fourth, lastly, moreover, furthermore, in addition, also, similarly</td>
<td>40</td>
</tr>
<tr>
<td>Contrast/concession</td>
<td>but, in contrast, on the other hand, on the contrary, on the other side, other than, despite, nevertheless, however, otherwise, although</td>
<td>29</td>
</tr>
<tr>
<td>Summation</td>
<td>in conclusion, concluding, to summarize, to sum up, overall, all in all</td>
<td>10</td>
</tr>
<tr>
<td>Apposition</td>
<td>for example, in other words</td>
<td>10</td>
</tr>
<tr>
<td>Results/inference</td>
<td>therefore, thus</td>
<td>8</td>
</tr>
<tr>
<td>Other LWPs</td>
<td>and, in fact, indeed, or, mainly, as a result, in comparison with, in the case of men, of course</td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>112</strong></td>
<td><strong>112</strong></td>
</tr>
</tbody>
</table>
The total number of linking words and phrases found in the analysed essays was 112 or 1.6 per cent of all the words the students had used. Table 3 presents a list of all LWPs the students had used in the essays and the total frequency of LWPs in the particular semantic category. The total number of LWPs used in the essays allows us to assume that our results correlate with the research observations mentioned in Ngadda and Nwoke’s (2014) and Plakans and Gebril’s (2017) studies that ‘higher level texts have more inferred, rather than explicit, cohesion (Graesser et al., 2004)’ (in Plakans and Gebril, 2017: 109).

Overall, the students tend to use linking words and phrases typical for illustration essays appropriately. The students use LAs of enumeration (first of all, first(ly), secondly, thirdly, lastly), addition (in addition, similarly, also, furthermore, moreover) and summation (in conclusion, concluding, to summarise, to sum up, all in all) to introduce paragraphs. However, not all body paragraphs start with LWPs:

First body paragraph: Firstly, to notice a university, it needs to have eye-catching advertisements on the Internet, on the TV, on the radio and also on billboards. […]

Second body paragraph: Not only colourful commercials will lead to a choice. It is necessary for the school or university to have wide information about its programmes, the environment, possibilities, etc.

Third body paragraph: Lastly, attractive offers are important in the choice of studying.

As seen in the sample above, only the first and the third body paragraph contain LWPs. This is another indication of what has been observed in previous studies (Ngadda and Nwoke’s, 2014; Plakans and Gebril’s, 2017) that students try to apply different means (not only LWPs) to make texts coherent. The second body paragraph, however, needs elaboration concerning its sentence structure; namely, the student has misused the linking phrase of addition (not only…, but also…).

In the essays the students also use LAs of concession (although, nevertheless, despite), apposition (in other words, for example), contrast (in contrast, on the contrary), and result/inference (thus, therefore). The latter four groups are mainly used to link sentences not paragraphs; thus, they can be considered to be used appropriately for the context.

Enumeration LWPs are sometimes used interchangeably with LWPs of addition to introduce a paragraph, but it is not a mistake:

Firstly, Latvia was one of the fastest growing economies in all of Europe, until the economic crisis put an unfortunate stop to it.

Moreover, based on the Constitution and democracy, the citizens of Latvia live in a free country, where they are not pressured into doing what they do not want to.
The students introduce the concluding paragraph by using the LWPs *in conclusion*, *concluding*, *to summarise*, *to sum up*, *all in all*, *overall*:

**In conclusion,** employees can be motivated in different ways; however, as majority of people in Latvia are not as rich as they would like to be, salary and bonuses could be the major motivator.

**To sum up,** salary and bonuses are not only motivators for staff in Latvia.

**All in all,** great salaries and bonuses work as a brilliant motivator to increase the efficiency and quality of the work.

**Overall,** every part of an advertising campaign affects the choice of a person.

Nevertheless, some errors in the use of both inter-paragraph and inter-sentential LWPs are observed. Figure 1 illustrates the proportion of properly used LWPs and errors regarding the use of LWPs.

![Figure 1. Proportion and type of errors found in the analysed essays](image)

As Figure 1 illustrates, there were only 13 errors found in the use of the total 112 LWPs found in the analysed essays. Essays of 2 international students and 4 local students contained errors, while 12 essays were without any errors regarding the use of LWPs. 3 out of the 6 essays with errors contained only 1 error.

The most consistent error (11 out of 13) is the use of LWPs that do not suit the essay register. The students had to write an academic essay, but they started sentences with *and*, *but*, *or*, *which*, according to the list presented in Table 1 of this paper, were informal LWPs. For example, when discussing the need for knowing the local language to get a job in Latvia, a student has written:

*Probably you do not know Latvian very good, or do not know it at all. But* you need to live somehow.
Another student even starts a paragraph with *but*:

**But** the real alarming fact concerns the unemployment rate for age categories: Italian people between 15 and 29 years are shown to have a 40% rate, almost double than the EU average.

One more example:

**That’s** why we are all in a race against time and thus motivated to achieve faster than ever before.

Here the student has also used an informal way of linking sentences, which indicates forgetfulness, faulty learning or no teaching that contracted forms are not used in the formal register. A probable cause of these errors seems to be the impact of the context the students are familiar with, namely, newspaper and magazine articles they read and where coordinating conjunctions starting a sentence and even a paragraph are acceptable and rather frequently applied, as the authors’ observations when using articles for teaching show. Another cause might be the impact of the informal register. Leech et al. (1989: 398) mention that coordinating conjunctions such as *and, but, or* are used to start a sentence in informal written English. Thus, these could be considered intralingual errors.

Another example illustrates the misuse of the coordinating conjunction *or*:

They will help you to decide what kind of job you need to look for, and then some of your friends may help you to get the job. **Or** your family can advice you to work with them. […] **Or** if your friend is hiring you then it means that probably you will have better conditions.

The example also indicates that the student might have some word choice problems as the spelling difference between the verb *advise* and the noun *advice* seems to be neglected. In other words, it is possible to assume that the misuse of the coordinating conjunction *or* may be classified as an intralingual error because the other errors in the presented sample may also be considered intralingual.

Starting a sentence with a coordinating conjunction could also be a grammatical or a punctuation error, like in the following example:

**Ideally** you should have a good command of the language – listening ability, writing and speaking. **And** should be willing to improve upon these skills once found a place.

The student uses an incomplete sentence. It has to be admitted that the discussed essay demonstrated a number of errors in sentence structures, related punctuation and capitalization; thus, this is just one more example of the overall problems of the particular student’s academic writing skills and intralingual errors.

In 2 cases students do not punctuate LWPs properly. For example:

**Also** your friends or family might know people who are looking for a new workers, without putting an offer in the internet.
The sentence demonstrates other grammatical errors, which may lead to a conclusion that it is the overall students’ competence in English that might have affected proper punctuation after the LWP, which is another intralingual error.

In one case a student had selected a linking phrase of comparison when discussing contrast:

Secondly, the study process at the school provides with basic information about the subject. It includes an overview of economics and introduces its biggest concerns. It includes an overview of economics and introduces about its biggest concerns. In comparison with the school, professors at the University of Latvia provide with more detailed knowledge, which helps to understand microeconomical and macroeconomical processes and allows giving a constructed opinion about discussed issues.

In the following example, it can be observed that the student knows how to use the LWP properly, but the misuse of articles, word choice and an incomplete sentence in the LWP part make the sentences difficult to comprehend:

Despite the low presence of graduated, most of them will have to choose a different sector of employment. On the contrary, less educated candidates might have easier access to careers such as waitress, electrician and day labourer.

This example and also a number of others above justify di Gennaro’s (2016) approach that it is not so important to study and analyse the quantity of errors students commit, but it is more important to consider the entire context for the errors, and in this particular case, the context makes us assume that the student is still on the way to achieving a proficient user’s level.

CONCLUSIONS AND PEDAGOGICAL IMPLICATIONS

The research results demonstrate that:

- At a proficient user’s level, linking words and phrases are not among very frequently used discourse markers to keep the written text coherent and unified.
- Overall, the students demonstrate good knowledge and skills of the use of appropriate linking words and phrases in illustration essays as there are rather few errors observed (13 cases out of total 112 LWPs used).
- In illustration essays the students use LAs of enumeration, addition, summation, concession, apposition, contrast and result/inference. LAs of enumeration, addition, apposition and summation are used as inter-paragraph LAs.
• All of the observed errors may be classified as intralingual errors, which coincides with Heydari and Bagheri’s (2012) conclusion that more advanced learners mainly demonstrate intralingual errors.

• The majority of the observed LWP errors were register errors, that is, the students used LWPs appropriate for the informal register. The probable causes of these errors are faulty learning or teaching, forgetfulness and likely overexposure to the informal register.

• Knowledge and skills of how to use LWPs properly do not result in the overall correctness of a written text and the students’ ability to express themselves comprehensively and without errors.

Based on the above mentioned conclusions, the following teaching implications may be derived:

• Special emphasis should be placed on making students aware of the differences between the LWPs used in the formal and the informal register. The analysis of different types of written texts and their register and its characteristics might be very helpful to attain this goal.

• Additional tasks on training students’ skills to distinguish between registers need to be designed, as well as lists of LWPs appropriate for the informal and the formal register need to be prepared. That will allow also students whose overall language proficiency is lower not to misuse LWPs.

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