Acquisition of Prepositions in View of Crosslinguistic Influence and Input in L2
English: An Analysis of Ukrainian Learners' Written Language

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Recently, the focus on learners' errors has been among the most relevant issues in second language acquisition. The aim of this paper is to study the erroneous forms produced in writing the English prepositions along with investigating the crosslinguistic influence and language input as contributing factors. English prepositions and prepositional phrases being an important functional part of the language were considered as an appropriate means to investigate the extent of committed errors as well as to seek for the evidence of language transfer and influence of input. In order to supplement the general knowledge about the acquisition of English in a relatively young country, Ukrainian students of the upper secondary schools located in one of the cities of the Central Ukraine were chosen to be the subject of my investigation. 80 participants were asked to fulfill 5 exercises in a grammar test and fill in the questionnaire. The research materials were tailored to provide the necessary data for answering the three research questions.

The common-practice methods including error analysis, transfer analysis, and comparative approach were used for the research. The results showed a high content of errors in the elicited data with a substantial part of deviations presumably caused by native language transfer, and a low level of extracurricular input though having an obvious impact on the language performance. Based on the result of this study, it was suggested to minimize the use of Ukrainian while teaching English and to increase the amount of in-class language input and output as a possible option to improve the language performance by Ukrainian learners.

Key words: prepositions, crosslinguistic influence, transfer, input, error analysis, transfer analysis

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List of abbreviations

EL – English language

L2 – second language

FL – foreign language

L1 – first language, mother tongue

SLA – second language acquisition

TL – target language

CA – contrastive analysis

EA – error analysis

NL – native language

IL – interlanguage

CLI – crosslinguistic influence

TA – transfer analysis

UL – Ukrainian language

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1. Introduction

As a young independent country, Ukraine is trying to find the best ways of becoming part of the European community. English has become an essential part of the educational process in every Ukrainian school. Therefore, it is clear that the need for studies into second language acquisition by Ukrainian learners has currently been of high priority. English and Ukrainian are distant languages and so numerous aspects of language can be suggested for investigation. For this research, I have decided to concentrate on the category of prepositions along with some of the contributory factors having an effect on acquisition of the English language (EL) but prepositions in particular.

Prepositions play a significant part in the English language, and it is explained by their ability to fulfil additional functions in the language in the absence of suffixes or denoting cases as in Ukrainian, for example. Prepositions are highly productive components of English and actively used for developing new meanings. These factors encourage the sophistication of the prepositional system in English and continuous growth of its role for communication purposes. By investigating the acquisition of prepositions by second language (L2) learners, it is possible to provide significant insight into the role of errors, interlingual transfer and language input in the process of learning a foreign language (FL).

The present study has three main aims: to define the extent of prepositional errors committed by Ukrainian speakers of L2 English in writing, to examine the possible positive and negative effects produced by first language (L1) transfer, and to investigate the influence of extracurricular input on the acquisition of prepositions. The issues highlighted in this research have been of foremost importance in numerous second language acquisition (SLA) studies. The three significant vectors in second language acquisition theory, that is error analysis, transfer analysis and language input, have been chosen to be investigated within the parameters of L2 acquisition by Ukrainian learners, bearing in mind the insufficiency of English and Slavonic language comparison studies.

The study analyzes prepositional errors committed by Ukrainian learners of L2 English in writing, examines the evidence of L1 (Ukrainian) influence in the acquisition of L2 (English) and possible positive and negative effects produced by L1 transfer. The empirical part of this thesis was conducted in two schools in central

Ukraine in February 2020. The respondents were 80 eighth and ninth grade students, aged 13-15. The data were analyzed with methods of error and transfer analyses.

The study begins with an overview of relevant theoretical issues, including the meaning of error in linguistics and different approaches towards the investigation of errors, the phenomenon of crosslinguistic influence and input hypothesis, along with supporting studies and contradicting theories. It proceeds with the common features and differential peculiarities of English and Ukrainian prepositions and later to previous studies with similar goals dedicated to investigating prepositional errors. Here I outline which points may serve as a basis for my research or be adopted from their works for further application. Below are only the main ideas lying at the roots of the issues to be highlighted.

In the empirical part of the thesis, the research data and methods are first described. Here I explain the choice of subjects for the study, present the research data and characterize the data collection procedure; the methods selected to find the answer to each of the three research questions are also outlined. In addition I describe conducting of pilot testing of research data and display its conclusions. Then I continue by submitting the obtained results.

In the last chapter of this study, the results are thoroughly discussed and explained together with assuming the possible sources and reasons lying behind them. The study limitations as well as the suggestions towards future research could also be found in the same section.

2 Background of the study

This section offers an overview of the linguistic aspects and theories of second language acquisition that are relevant to this study. First, I focus on the theories most proximate to the goal of this study so as to give the general idea of the points investigated in this research. Thus, the different views towards the notion of errors, the role of error analysis in SLA, the the crosslinguistic influence conception and input hypothesis are presented and evaluated in order to justify the chosen approach. Next, I explain the distinctive and common features of Ukrainian and English prepositions and describe relevant previous studies on the topic.

2.1 Errors and error analysis

In linguistics, when speaking about investigation of errors committed by target language (TL) learners, two mainstream theories can be distinguished. One of them, *contrastive analysis* (CA), is focused on revealing the potential errors subject to their L1 dependence nature, i.e. on predicting the TL errors caused by L1 influence. The theory of *error analysis* (EA hereinafter) gained traction as a result of strong criticism that contrastive analysis on its own was insufficient. Although error analysis as a research method existed before, it was owing to Corder (1967) that EA was taken to new heights in SLA. The theory became very popular as it allowed one to concentrate on the actual, committed errors rather than potential ones. James (1998, 1) described EA as "the process of determining the incidence, nature, causes and consequences of unsuccessful language".

Within the structure of SLA, error analysis has had a long history. Though less popular at the beginning, EA has now found acceptance with behaviourism coming to the fore. It was Corder, known for his sizeable contribution made in the field of applied linguistics, who revived the interest in error analysis by his work "The significance of learners' errors" ([1967] 1974) and established it as a leading practice in SLA. At about the same time, scholars started dividing in their opinion regarding transfer. The proponents of the behavioral standpoint first considered that language interference was resulting from previous habits but further empirical studies proved that errors could either be influenced by the so-called "transfer of learning" (Selinker [1972] 1974) or represent the part of "idiosyncratic dialect" (Corder [1971] 1974) or "interlanguage" (Selinker [1972] 1974). By contrast, other works like those by the

psychologist Skinner (1957) and the linguist Lado (1957) insisted upon the contrastive analysis hypothesis to prove the existence of positive and negative transfer. The input hypothesis offered by the linguist Stephen Krashen in 1977 set the highest premium on comprehensible input as the only way to increase linguistic competence.

By the beginning of the 1970s it had become usual practice to apply EA rather than CA in error investigating and such replacement stemmed from a number of new findings and developments. Firstly, predictions of errors made by CA were not always realized; besides, investigations showed that many errors were caused by various other reasons apart from L1 transfer. Secondly, the trends in psychology changed from Behaviorism to Mentalism which was also reflected in SLA, thus more attention was given to a person's innate capacity for acquiring languages, like Chomsky's (1965) *Language Acquisition Device* and *latent language structure* offered by Lenneberg (1967) and Selinker ([1972] 1974), instead of assuming some external influences. And last but not least, researchers became less concerned with the L2 teaching process and pedagogical ideas, but instead concentrated on the strategies of L2 learning (for example, Corder 1967, 1973, 1981; Selinker [1972] 1974, 1978).

Despite all its strengths when compared with CA, EA's deficiencies were still evident and criticized by a number of scholars. Schachter (1974) noticed the absence of taking into account "avoidance strategies", when a learner may simply avoid using a certain language structure if he or she finds it too difficult. According to Ellis (1994, 67-68), the main drawback of EA lies in the fact that it fails to provide the full picture of language learning as it concerns itself with errors only but not with correct productions and good practice. Other EA limitations also include its lack of insight into how L2 learners use language, providing therefore only a partial picture, and that most of its studies are cross-sectional in nature.

However, the important breakthrough achieved by EA was that errors were considered as the way to explore the linguistic development of a learner and explain the learning process. George (1972, 2) defined error as "an unwanted form, specifically a form which a particular course designer or teacher does not want". Corder (1981, 10) offered "to refer to errors of performance as mistakes" and use the term error for systematic errors.

The EA approach requires us to take account of all types of errors that might be found in the collected materials and identifies two basic error sources: native

language (NL) or any other previously acquired language (interlingual) and target language (intralingual). Errors associated with L1 influence are dealt with in 3.3 below. Here we should dwell on an issue of different errors which are caused not by L1 transfer but committed when affected by the previously learned TL rules. The term *intralingual interference* was introduced by Richards (1970) to explain the cases when the acquirer's decision in L2 production is influenced by the previously received TL knowledge. Errors of this sort are called *intralingual and developmental errors*. These errors are rather frequent in English language usage; they may be present at any level of acquisition and no matter which mother tongue a L2 speaker has. While working on identifying the types and causes of the above-mentioned errors, Richards (1974) suggested that "intralingual errors are those which reflect the general characteristics of rule learning, such as faulty generalization, incomplete application of rules, and failure to learn conditions under which rules apply" (Richards 1974, 174). Here is Richards' proposed classification of intralingual errors, with short explanations from me:

- *Overgeneralization*: when learners move beyond the implementation of some rule due to not perceiving particular concepts as being different.
- *Ignorance of rule restrictions*: applying a rule to those contexts where it is not used in L2; it might be rule application through the prism of analogy.
- *Incomplete application of rules*: when a learner refuses to acquire more complicated structures finding it more comfortable for communication to use simpler rules.
- *False concepts hypothesized*: resulting from the failure to understand certain aspects arising from L2 language features.

While Richards and Sampson speak about the transfer of training when "previous learning may influence later learning" (1974, 6), Selinker ([1972] 1974) has a skeptical view regarding the use of concepts derived from linguistic description of only the target language or native language, and suggests the existence of an intermediate level between the native and target languages and proposes using the term *interlanguage* (IL). Selinker is sure that "successful language learning […] is the reorganization of linguistic material from an IL to identify with a particular TL" ([1972] 1974, 48); he distinguishes five processes relevant to IL and being, in his opinion, fundamentally important for SLA, these are: language transfer, transfer of

training, strategies of second language learning, strategies of second language communication, and overgeneralization of TL linguistic material ([1972] 1974, 37).

The term interlanguage is the collective name for the TL versions demonstrated by learners and it has been the most popular among linguists, though there are also other names describing this phenomenon. Corder (1981), for example, uses the term "transitional competence" in parallel with interlanguage. Paying also much attention to the issue in his works, he suggests "…that the nature of the interlanguage grammar a learner creates for himself is to a considerable extent determined by the knowledge of language the learner already possesses and how elaborate or sophisticated that knowledge is" (Corder 1981, 74). Brown (1980, 165) explained the meaning of linguistic error in a similar vein having qualified it as "… a noticeable deviation from the adult grammar of a native speaker, reflecting the interlanguage competence of the learner".

Thus, it may be assumed that any transfer, either from native language or target language, can be considered as a part of interlanguage and therefore, while conducting the error analysis in this research and trying to find the presumable reasons for some errors, it is possible to speak of the mentioned notions in the same context.

The concepts described above are important for understanding the empirical part of this study, as they represent an integral part of the five steps in EA research described by Ellis (2005, 57). The five stages of EA are as follows:

(1) Collection of a sample of learner language. Three main types of samples are identified and used widely in EA studies. The samples are distinguished according to the size: massive (a number of samples collected from a big quantity of subjects), specific (one sample and limited quantity of subjects) and incidental (one sample received from one subject).

(2) Identification of errors. At this stage the researcher's task is to separate errors from mistakes.

(3) Description of errors. The identified errors are counted at this stage, and then distributed according to the chosen classification.

(4) Explanation of errors. At this stage a researcher is explaining the nature of errors, which might be interlingual, intralingual or unique.

(5) Evaluation of errors. This stage "…involves determining the gravity of different errors…" (Ellis 2005, 67).

As Corder (10-11, 1981) explained, there are three ways in which errors are significant: (1) informing the teacher about the learner's progress, (2) explaining to the researcher how the learner is learning or acquiring the language, and (3) serving the learner as an aid in language learning. Concerning this matter, Ellis (2005, 51) concludes that to achieve the second (2) and third (3) purposes, it is not necessary to apply the procedures in error evaluation. However, I decided that the results obtained during the fifth stage will be also useful not only for EA in this research, but also for another part of empirical study, i.e. in the process of input analysis. Thus, all five stages of EA are utilized in this research.

Corder (1973) classifies the errors which might be found in FL learners' utterances into four categories: omission, selection, addition, and disordering of some elements. This classification will be used in my research at one of EA stages.

2.2 Crosslinguistic influence

The term *crosslinguistic influence* (CLI) was offered by Kellerman and Smith (1986) as a general name for the phenomena which reflect how one's knowledge of a language may affect the same person's knowledge and use of another language. The definition given by Jarvis is more detailed as he describes CLI as "…the influence that a person's knowledge of one language has on that person's recognition, interpretation, processing, storage and production of words in another language" (2009, 99).

A simpler explanation can be found from Allard, Bourdeau and Mizoguchi: "Crosslinguistic influence is a phenomenon that can be observed when speakers use skills that can be traced back to their native language (or another language they might have previously learned) when using a second, third or foreign language" (2011, 677). Odlin construed transfer as "…the influence resulting from the similarities between the target language and any other language that has been previously (and perhaps imperfectly) acquired" (1989, 27).

Similar to Jarvis and Pavlenko (2008), equating these two terms and interpreting them both as the actual use of linguistic features of one language in another by a bilingual or multilingual speaker, in this study I will use the terms

crosslinguistic influence and transfer or language transfer as synonyms, as many other contemporary linguists do.

CLI is an essential part of the language contact. This phenomenon has been long investigated by a number of linguists. Thus, the fundamental work devoted to the CLI theory is considered to be the monography by American philologist Uriel Weinreich *Languages in Contact*, first published in 1953. To explain the CLI phenomena he used the term *interference* and described it as follows: "The term interference implies the rearrangement of patterns that result from the introduction of foreign elements into the more highly structured domains of language, such as the bulk of the phonemic system, a large part of the morphology and syntax, and some areas of the vocabulary…" (Weinreich 1953, 1). The researcher emphasized that considering interference as a mere borrowing would be an oversimplification (ibid.). Moreover, the author found it critical to separate language from speech interference. In speech, it obtains the features of an occasional borrowing, while in language, it becomes established resulting from frequent occurrence. "In speech, interference is like sand carried by a stream; in language, it is the sedimented sand deposited on the bottom of a lake" (Weinreich 1953, 11). Weinreich distinguished three types of interference: phonic, grammatical and lexical (1953), and since my study is focused on analyzing morphological errors (prepositions and prepositional phrases) and detecting transfer evidence, the chapter in Weinreich's work devoted to grammatical interference (1953, 29-47) seems meaningful for research matters.

On a related note, it is worthwhile mentioning that a number of language researchers (Dulay and Burt 1974; Thomason and Kaufman [1988] 1992; Eubank 1993/1994) have not recognized the existence of morphological transfer, and inflection-related transfer in particular. Odlin (1992, 171) admitted that some scholars didn't see transfer as a central issue in SLA theory, and even made an assumption that some of these scientists could have probably misunderstood Weinreich's theory (1953) in some ways, and in support he invoked numerous studies proving the cases of transferability, as a counterargument.

The interference phenomenon has been studied by linguistics, sociolinguistics, psychology, psycholinguistics, language teaching scientists, etc. In philology, the term interference was first introduced by Prague School members, to whom it stood for the process of deviance of the languages when in contact with each other. Ukrainian philologists also tend to appeal to this very term in their studies and they have been

paying much attention to the problem for quite a long time already. Semchinskiy, for example, describes interference as the sum of phenomena denoting the influence of one language upon another, clearly emphasizing that this term "refers not only to the result of interaction process between languages, but also to the irregularity of action of the interacting languages" (1974, 19; my translation). Therefore, the study is centered around the mutual interaction of languages, whether positive or negative, and language contacts, where the author strictly distinguishes these two notions: "When we speak about language interactions, we mean the linguistic process where two different language structures are engaged; when we speak about language contacts, we understand primarily the state of interacting languages" (1974, 18; my translation). Zhluktenko shares the same opinion, accentuating that the concepts of language contacts and language interactions relate to each other as the cause and effect (1966, 12). It should be noted, that in modern linguistics the term interference is mostly associated with negative transfer only.

Among the recent studies focused on CLI, *Cross-linguistic influence in language and cognition* by Jarvis and Pavlenko (2008) is regarded as highly-valued and substantial research in this field. The authors have deeply explored CLI both in speech production and, in comprehension, have provided an extensive review of the related empirical and theoretical studies. Furthermore, and what is particularly noteworthy, they have shredded the *ignorance hypothesis* which assumed that "…transfer is nothing more than falling back on a language that one already knows when lacking knowledge in the language that one is presently learning" (Jarvis & Pavlenko 2008, 8). As a rule, in SLA studies transfer was regarded to be a synonym for native language influence (Ellis 1994, 11). In their work, the authors paid attention to an extensive description and characterization of linguistic transfer and its aspects, less investigated in the previous CLI studies, as just a semantic term and conceptual transfer, forward transfer, lateral transfer, reverse transfer and bidirectional transfer similarly (Jarvis & Pavlenko 2008). However, my study does not involve transfer analysis alone; thus I will not carry out precise CLI investigation in accordance with Jarvis's and Pavlenko's guidance; but, at the same time, some parts of their research will be used to point the way forward and for indicative purposes.

Firstly, I will be guided by their instructions in identifying crosslinguistic influence instead of treating it as a "you-know-when-you-see-it phenomenon" (Jarvis, 2000).

Secondly, their CLI classification scheme covering probably all aspects of transfer, seems to provide a full explanation of the greater part of transfer analysis, and so will be applied for transfer analysis of the elicited data in this research. Jarvis and Pavlenko (2008, 20) offered the innovative idea of characterizing the CLI types across ten aspects, which are the following:

- Area of language knowledge/use: phonological, orthographic, lexical, semantic, morphological, syntactic, discursive, pragmatic, and sociolinguistic
- Directionality: forward, reverse, lateral, bi- or multi-directional
- Cognitive level: linguistic, conceptual
- Type of knowledge: implicit, explicit
- Intentionality: intentional, unintentional
- Mode: productive, receptive
- Channel: aural, visual
- Form: verbal, nonverbal
- Manifestation: overt, covert
- Outcome: positive, negative

Thirdly, some of the factors that interact with transfer, discussed in their work, will be taken into account while compiling a questionnaire for data elicitation, as they, in my opinion, also are connected to the input analysis.

Furthermore, Jarvis and Pavlenko speak about the difference between positive and negative transfer: "Positive transfer occurs when assumed similarities are compatible with objective similarities, whereas negative transfer occurs when assumed similarities conflict with objective differences" (2008, 182). Some researchers consider linguistic similarity mostly to be an obstacle in SLA (Rozenzweig 1972, Vinogradov 1967). Others speak of it as of a substantial aid: "The search for similarities is an essential process in learning" (Ringbom 2007, 5). Krashen admits that both the advantages and disadvantages of falling back on first language knowledge are present, but still notices that drawbacks prevail, and they obstruct the real progress in SLA: "Even if the L1 rule is similar to an actual L2 rule or transitional form, it is not clear that these rules will help the acquirer progress – they may not take the place of "true" L2 rules in the developmental sequence" ([1982] 2009, 27). Jarvis and Pavlenko recognize, and I tend to support this very idea, that similar to the L1, target language is learnt easier than the distant one, but the

unearthed (or assumed) similarities can lead to both positive and negative transfer (2008, 182). Besides, they give an example where both positive and negative transfer is possible at the same time (ibid.). Odlin (2000, 537) contradicts Krashen's (1982) idea that transfer is nothing but "falling back" on the L1, and prefers to use the notion of *retention* when "… the attempt at copying converges with the target language (i.e. positive transfer) or diverges (negative transfer)". As evidence, and to illustrate the difference between the two abovementioned notions, he provides an example of hybrid forms (ibid.), when one case of transfer combines the forms of L1 and L2 at the same time.

Following the hypothesis that negative transfer occurs mostly when L1 and L2 are distant languages (Bussman 1996; Odlin [1989] 1996; Arabski 2006), as English and Ukrainian indeed are, it might be presumed that it is negative transfer which is going to be represented in most transferability cases, detected in the elicited data of my research. Notwithstanding this assertion, I expect to find the evidence of both positive and negative aspects of transfer.

2.3 The input hypothesis

The term *input* comes from the sphere of information processing. In my estimation, the most perceptive and informative explanation is offered by Smith, who describes input as "…language data that the learner is exposed to, that is, the learner's experience of the target language in all its various manifestations" (1993, 166).

In 1977 the linguist Steven Krashen developed *the input hypothesis*, and in 1982 he presented five hypotheses of second language acquisition theory in which he also included his input hypothesis. Later on, the group of five hypotheses became associated with the mentioned term, as the author developed the topic, and all five hypotheses were to one degree or another focused on *the comprehensible input* (Krashen 1977). I will briefly highlight each of the hypotheses, giving priority to the input hypothesis given that the input presence in the elicited materials will be analyzed in this study.

    (1) The acquisition-learning distinction. Krashen strictly separated the phenomena of language acquisition and language learning considering the first one to be a subconscious process as well as the result of language acquisition, the acquired competence; while the second one was seen as a conscious process

(Krashen [1982] 2009, 10). In other words, he spoke about implicit and explicit learning, where the former was considered to be much more effective in obtaining language competence than the latter.

(2) The natural order hypothesis. Based on a number of preceding studies, Krashen found it relevant to draw this hypothesis, having observed that in the SLA process, the acquirers of the same L2 display exceptional similarity in the order of acquiring certain language elements, such as grammatical morphemes (Krashen [1982] 2009, 12-14).

(3) The monitor hypothesis. According to Krashen, the L2 acquirers use self-monitoring and self-correction in reliance on the learned (not acquired) competence before producing an utterance; hence, successful application of Monitoring is possible in the presence of three conditions: time, focusing on form and knowing the rule (Krashen [1982] 2009, 16). In addition, three individual variations in Monitor use were specified: Monitoring Over-users, who are applying their conscious knowledge to check their input all the time and thus showing no real speech fluency; Monitoring Under-users, whose output depends only on subconscious knowledge; and Monitoring Optimal-users, who are capable of effectively supplementing their acquired competence with the learned rules (Krashen [1982] 2009, 18-20).

(4) The input hypothesis. Following the author's explanation of the matter, it becomes clear why the input hypothesis is considered to be a central part of other five. "If the Monitor hypothesis is correct, that acquisition is central and learning more peripheral, then the goal of our pedagogy should be to encourage acquisition" (Krashen [1982] 2009, 20). Furthermore, through the pattern by which progress to the next stage of competence is achieved, evidence of the connection to the natural order hypothesis is provided ((Krashen [1982] 2009, 20-21). The hypothesis refers to the process of acquisition (not learning), where the input is understood as the system of enhancing the level of one's language competence via context or extra-linguistic information; and the result of the successfully understood input is the automatically obtained competence level which is "a bit beyond" the current one (Krashen [1982] 2009, 21-22).

Though admitting the clear importance of output, Krashen maintains its influence is indirect: "… the more you talk, the more people will talk to you! Actual speaking

on the part of the language acquirer will thus affect the quantity of input people direct at you" ([1982] 2009, 60).

I would like to conclude the review of Krashen's theory with his description of an optimal input. He offered three input characteristics for attaining optimal value: 1) input must be comprehensible 2) input must be interesting and/or relevant 3) input must be in sufficient quantity.

However, with the introduction of abovementioned theory SLA has faced some restrictions. As the criticism around this theory was growing stronger, the new fresh approach to language input was needed.

During the past four decades, more attention has been given to other two hypotheses which appeared owing to Krashen's input hypothesis. The first one is *the interaction hypothesis*, introduced by Long (1980, 1981). Following that hypothesis, the linguists concentrated on examining "the relationship between negotiation of meaning and learner's comprehension" and comparing "the effects of premodified and interactionally modified input" (Mackey, Abbuhl, Gass 2012, 8).

Gass devoted a number of her works to investigate the effectiveness of modified input and interaction combination. In *Input, Interaction and Second Language Production* (Gass and Varonis 1994), she and her colleague empirically proved that both modified input and interaction contributed to immediate task performance and better communication. In *Input, Interaction and the Second Language Learner,* Gass (1997) combined two components of SLA and offered *the input-interaction model* as the backbone of language development; it was intended to demonstrate the variety of stages that input goes through before the learner can effectively apply it. In fact, Gass ([1997] 2017, 6) pointed to a significant difference between comprehensible input and comprehended input, seeing the former as something controlled by the speaker, while the latter was considered as the one focussing on the hearer and relevant to *intake*. According to Gass ([1997] 2017, 7) "intake is the process of assimilating linguistic material".

Some degree of attention in Gass's studies (1985, 1994, 1997, 2000) is also paid to output theories. And here we come to another post-input hypothesis –Swain's *output hypothesis* (1985). Swain (1985) argued that comprehensible input, though being important for SLA, still is not enough for achieving L2 acquisition. However, as she claimed, the combination of comprehensible input and comprehensible output provides opportunity to accelerate TL acquisition (ibid.).

Other input-related hypotheses include integration, apperception, attention, awareness, consciousness, etc., but, since these concepts are not the matter of my study, I do not speculate about them here.

The conclusions which can be definitely drawn from Krashen's input hypothesis is that language input significance is a certainty, and some type of input is evidently needed to ensure successful language acquisition.

2.4 English and Ukrainian prepositions compared

Though English and Ukrainian belong to rather distant language sub-families, namely Germanic and Balto-Slavik respectively, and have different writing systems, represented by Latin and Cyrillic alphabets, both languages have in common the fact that they use prepositions as a means of expressing relations inside their syntactic units.

In Ukrainian grammatical theory, a preposition is defined as an "uninflected functional word, serving to express the syntactic relation of a noun (or its equivalent), being dependent on other words in a phrase or sentence" (Pliushch et al. 2010, 293; my translation).

Ukrainian prepositions are generally classified according to their origin (primary or non-derivative, and secondary or derivative) and according to their form (simple, complex and compound) (Radyshevska et al. 2008, 287-288).

As the origin of primary prepositions appears difficult to identify now, in contemporary opinion, they are considered to be non-derivative. Secondary prepositions are those the origin of which it is possible to trace since they are still connected with the forms of the words they have been derived from. Such prepositions were created in two ways: either from other words (nouns, adverbs or participles) or by combining two or more prepositions. Primary prepositions are less in number but they usually have multiple meanings, while secondary prepositions have one meaning as a rule.

Simple prepositions consist of one word. They might be either derivative or non-derivative. Complex prepositions are derivative prepositions formed by combining two or more non-derivative ones. Most of the complex prepositions are written as one word. Compound prepositions consist of two parts, written separately.

They are the derivative prepositions formed by combining adverbs or nouns with non-derivative prepositions.

Prepositions are also classified depending on their semantics. The biggest group includes prepositions bearing the meaning of spatial relationship. The total number of Ukrainian prepositions is over 220, and 137 of them denote spatial relations (Korunets' 2003, 259).

In English grammar, "prepositions are linking words that introduce prepositional phrases" (Biber, Conrad, Leech 2003, 28). As a rule, a preposition is followed by a noun phrase, thus, a preposition can be treated as a linking word connecting other structures with a noun phrase (ibid.).

A common method is used to classify English prepositions by their form, into four main types:

(1) Simple prepositions, represented by short simple words like *at, for, in, off, on, over, under,* etc.

(2) Derivative prepositions, like *below, beside, along,* etc.

(3) Compound prepositions, usually made up by combining two simple ones: *within, into, throughout,* etc.

(4) Composite prepositions, containing one or two simple prepositions and another word: *instead of, in front of.*

A wide variety of preposition classifications can be found in the work of Seth Lindstromberg (2010, 15-19). In this research, I will utilize only some of them:

(1) Classification by domain of application: prepositions of space and time (*at, on, in…*), prepositions of time (*after, during…*), prepositions of place (*alongside, behind…*), prepositions of neither time nor space (*concerning…*).

(2) Classification by specificity of meaning: general (*in, on, under…*) and specific (*into, onto, below…*).

It should be clarified here, that general prepositions are used with all kinds of nouns, so that such meanings of the prepositional phrase as spatial, temporal, etc. are not defined by the preposition, but by the noun. At the same time, special prepositions can be used only with certain nouns and have only certain meanings (Korunets' 2003, 260).

Ukrainian and English prepositions have similar lexico-grammatical meaning, combinability and function; the difference is represented by the way in which they introduce nouns in the two languages.

Ukrainian language (UL) has a seven-case system to denote the relations of sentence parts, prepositions being not of the first importance in specifying these relations. The case is a grammatical form of a noun, denoting certain aspects of the noun (such as subject, object, modifier or adverbial) in relation to other words in a phrase or sentence (Hnatiuk, Bas-Kononenko 2006, 90; my translation). In English the single positive case morpheme - **s'** or **'s** - represents only a small number of relations. Thus, prepositions play the major role in denoting of sentence parts' relationships.

In Ukrainian, prepositions have a limited "latitude" in a phrase or sentence. For instance, certain prepositions can be used only with certain noun cases. A preposition always precedes a noun and is closely connected with it. A preposition cannot be used without the noun. In English, the preposition is much more independent. It can be placed separately from the noun, refer not only to a word, but also to a word-combination or a clause (Korunets' 2003, 206–211). Besides, they are characterized by bilateral combinability, i.e. they have stable right-hand connections and variable left-hand connections (Carter and McCarthy 2007, 206).

Despite the fact that Ukrainian and English prepositions have certain common features, English language learners still have many difficulties due to the different meanings of prepositions in both languages and the variety of contexts in which they can be used. For instance, a native speaker of Ukrainian could experience complexities with translating the preposition *на* into English, since it can be expressed by such English prepositions as *on* (on the surface), *at* (at work), *for* (for a long time) and even *in* (in the picture), while in Ukrainian *на* will be used in all these contexts. The same situation can be observed with the preposition *у* and its variety of English equivalents: *in* (in the house), *into* (into the river), *on* (on Monday), *at* (at Grannie's), etc. The usage of an appropriate preposition usually depends upon either how well one knows the application rules or upon language practice and previous experience. If, to take the English prepositions *over* and *above*, which are both translated into Ukrainian as *над*, it can be assumed that a learner might confuse them if he or she did not know which context each of them should occur in.

This study is focused on the prepositions of space and time represented by all forms discussed earlier in this chapter. The classifications mentioned earlier in this subchapter is instrumental in composing the materials for data collection, detecting the preposition errors, before analyzing and describing them.

2.5 Previous studies

A number of L2 studies are focused on English prepositions and use them as a tool to discover L1 influence on L2 acquisition. In this chapter I will shortly describe several studies that have been carried out recently and serve as a base for this research.

The MA thesis chosen as the basis for my study is *Crosslinguistic Influence on Prepositions in L2 English: A Comparison of Russian and Finnish Learners' Written Productions* by Vainio (2013). This study was esteemed as the one having the most closely related research tasks to those investigated in the present study. The main goal was to discover the CLI presence in typologically distant languages and to prove the hypothesis that Russian subjects would show better results than Finnish subjects, because they were familiar with the concept of prepositions, whereas the Finns were not (Vainio, 2013, 11). The received research materials were assessed using the combination of comparative analysis, error analysis and transfer analysis. The author chose written compositions and background questionnaires to serve the purpose of collecting primary data.

However, no positive transfer between the concepts of English and Russian prepositions was found. This tended to support the notion of transfer occurring mostly between typologically similar languages. The author also suggested other reasons for the lack of positive transfer, like poorer language skills, unqualified teachers or possible failure to perceive the similarity between the preposition concepts in Russian L1 and English TL. On the other hand, Vainio displayed the occurrence of negative transfer between distant languages, as a number of errors in the Russians' data were traceable to their L1.

Crosslinguistic Influence in the Acquisition of Spatial Prepositions in English as a Foreign Language (2016) is a more recent study into a related topic conducted by Alonso, Cadierno and Jarvis a few years ago. They investigated the use of English prepositions by L2 learners from two different L1 backgrounds: Danish and Spanish (Alonso, Cadierno and Jarvis, 2016, 100). The study focused on learners' interpretation of spatial configurations that are described by native English speakers with the prepositions "in", "on" and "at". The study also explored the extent to which learners' construction of those spatial configurations was likely to be influenced by the patterns of spatial understanding that were prevalent in their L1s.

The study showed that Danish, English and Spanish carry different conventions for conveying meaning in spatial relations, but it also revealed only very small differences between Danish and English. Judging from the results, the authors suggested that Danish-speaking learners of English might be drawing on similar interpretations to those of native English speakers, while Spanish-speaking learners of English differ considerably from both native English speakers and Danish learners. One of the strongest arguments to speak for L1 influence in the study was evidenced by the fact that the areas where the native English speakers' spatial construal patterns differed substantially from those of the L1 control groups were almost exactly the same areas where the native English speakers showed significant differences from the respective learner groups. The results of the study also allowed the authors to suggest possible pedagogical applications of spatial configurations in English with a focus on cognitive linguistics models.

Remarks on previous studies:

(1) It is obvious, that both of the studies have proven most of the hypotheses introduced by their authors. For instance, the evidence of such crosslinguistic influence phenomena as transfer and L1 influence were present in the research results. Thus, for my study I take the most from the previous experiences while trying to avoid some pitfalls, which could influence the accuracy of the results. In the theory section of the thesis I do not focus on the SLA theories and notions, which are widely and fully described in the previous works, but pay more attention to those aspects, relevant to the problem of my study, which are missing or just briefly mentioned before.

(2) Having analyzed the method sections in both studies, for the purpose of collecting data and their future analysis, I have decided not to employ writing tasks, like in Vainio's research (2013), since it is believed that a narrative task will not always meet one's expectations. As explained by Mackey and Gass: "One problem with this approach is that despite the prompt, learners may opt for a different form" (Mackey, Alison, and Gass 2005, 87). Thus I have decided to follow an example in the second study abovementioned, and use a sentence completion task for data collection; in fact, I chose to go with Murphy's grammar exercises, just as the authors of the said study did. But, treading in Vainio's steps (2013), I have also selected a background

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questionnaire as an additional elicitation tool to address a particular section of the research questions.

3 Data and methods

The present research is aimed at investigating the L2 performance of Ukrainian learners studying English as the second language through the example of English prepositions and prepositional phrases. To achieve the research aim, three questions need to be answered and expounded. These are: (1) To what extent do Ukrainian speakers of English commit prepositional errors in writing? (2) What is the evidence of L1 (Ukrainian) influence in any acquisition of L2 (English) linguistic items? (3) How does extracurricular input influence the acquisition of prepositions?

Having studied the recommendations provided by Mackey and Gass (2005) and Ellis and Barkhuizen (2005), describing the procedures of data collection, research designing and analyzing the elicited data in details, I decided to conduct quantitative research. Different types of research were characterized by Mackey and Gass (2005, 2), among which an *outcome-oriented* quantitative study was chosen as the most appropriate and consonant with the research task.

One more work I have relied on regarding processing the collected data is *Recommendations for Teaching Grammar (in particular Teaching English Prepositions)* by Ukrainian linguist Kovalchuk (2010). The article was written on the basis of Kovalchuk's PhD Candidate thesis devoted to developing an experimental curriculum for teaching English prepositions. Since the article is focused on providing methodological recommendations for the formation of foreign language grammar skills in students of English by way of exercises for learning English prepositions, and gives an overview of the most repeated prepositional errors as proven in her previous research, I decided to follow the offered guidelines while selecting the exercises for research data.

Ellis and Barkhuizen (2005, 22-24) distinguish three methods for data collection: (1) obtaining samples from naturally occurring language use, (2) clinical elicitation of samples and (3) experimental elicitation of samples (the latter two involving the usage of "specially designed instruments"). To explain methods (2) and (3), the authors draw on Corder's research (1976; reproduced in 1981). Thus, both methods are used to elicit specific data while experimental elicitation is more controlled and it is expected that "…learners attend primarily to form, are guided in the form to be produced and thus are focused on displaying usage of a specific linguistic form" (Ellis and Barkhuizen 2005, 23). Here, the researchers also

recommend employing the word "exercise" when speaking about the instrument for data collection in experimental elicitation (ibid.). Hence, as the purpose of the bigger part of the present research is to investigate a specific linguistic item, i.e. prepositions, it was decided to apply the experimental elicitation method.

In the course of investigating the possible connection between the level of language input and learners' performance in prepositions, I settled on a survey research, on questionnaires in particular. "Questionnaires allow researchers to gather information […] that is typically not available from production data alone" (Mackey and Gass 2005, 92).

The subchapters below contain a comprehensive review of research subjects and materials, and applied techniques.

3.1 Participants

In this subchapter I give a brief description of the Ukrainian school system in teaching English, in order to establish my decisions implemented for this part of my study. Next I explain my choice of participants, and the number of participants. The choice and description of the research data content, as well as the data collection procedure, is presented in the next subchapters. It should be noted also, that the terms *subjects* and *participants* are used as identical and interchangeable in this study.

3.1.1 Ukrainian school system

In Ukraine, every school has its own curriculum, though sometimes the curriculum is different for different classes within the same school. It depends on which type of sciences, humanities or scientific disciplines are prioritized within the class or school. A focus on human sciences provides for more academic hours of English instruction than when the focus is on scientific subjects. In any event, within the system of Ukrainian education, there are some schools and classes with advanced English learning. Hence, it is usually the responsibility of English teachers to decide how much time they devote to a certain item of material to be taught, and so they take the general curriculum for the English language and divide it through the teaching period specified for a certain class or school. It should be added that in Ukraine English is taught starting from the first grade of elementary school when most pupils are at the age of six.

For this research, I decided to choose subjects from two comprehensive secondary schools, from the classes focusing on humanities. Such choice was motivated by the decision to achieve results depicting the average performance. For that very reason, the students of the eighth and ninth grades aged 13-15 were selected. I assumed that their language acquisition should be at about the same level, so it would not become necessary to divide the materials into two groups.

3.1.2 Selection of participants

Ellis and Barkhuizen (2005, 25) suggest including a number of different groupings to produce a full description of the participants in a study, which include mother tongue, other languages, age, gender, education, social economic status, and opportunity for naturalistic acquisition. To avoid the possibility of influence by any other language, apart from Ukrainian, on the acquisition of English, I chose the classes where no other FL was taught. Based on the Ellis and Barkhuizen guidelines (2005, 42), before starting data collection, I also conducted short structured interviews regarding other variables in each class as outlined above. The answers established that the learners were of the same age (13-14 in the eighth grades and 14-15 in the ninth grades), all of them started learning English in the first grade, thus the learners from the eighth and ninth grades had been studying it for 8 and 9 years accordingly, and none of them had lived in any English-speaking country for more than a month. However, a number of learners gave notice of having two native languages, such as Russian, Armenian, and Romany. In this study, I decided not to have regard to the variable of age and social economic status as such, as these can be taken as having little influence in the matter. After this interview I decided that the question about mother tongue had to be added in the questionnaire instead of the question about the number of English lessons per week.

3.1.3 Number of participants

In order to get a fuller picture, 80 learners were given the research materials. There were 4 groups, representing 2 classes each from the eighth and ninth grades. Each group consisted of 20 learners approximately.

After processing the elicited data, I had to exclude 4 sets of grammar tasks, as they appeared not to meet the requirements of the research, that is, either the tasks were not accomplished at all or the answers did not belong to the category of prepositions. And though the questionnaires filled by these subjects were found as appropriate for the input analysis, still I had to exclude them from consideration as well since without the exercise part, the analysis would not have been comprehensive. Also I had to exclude two more sets of collected data, as these participants had other L1s apart from Ukrainian (Armenian and Russian in particular, and in addition the learners having L1 Romany had refused to be present during the data collection). Therefore, I worked with 74 samples of elicited data.

3.2 Research data

In this subchapter I confirm the choice of research materials, allocate certain types of data according to the research tasks and introduce the content of two types of research materials, applied in this study. Thus, I start with the set of exercises, continue with the questionnaire and finish with a detailed description of the data collection procedure.

3.2.1 Set of exercises

As it was already mentioned in subchapter 2.5, I decided to follow the example of Alonso, Cadierno and Jarvis (2016) and take the tasks from the popular grammar books by Raymond Murphy, *Essential Grammar in Use: a self-study reference and practice book for elementary students of English* (Murphy [1990] 2007, 229, 231) and *English Grammar in Use: A self-study reference and practice book for intermediate learners of English* (Murphy [1985] 2012, 243, 249, 275). The exercises seemed to be eminently suitable for this research, as they were colorful, interesting and short but at the same time effective.

Thus, the task set representing the grammar portion of research materials consisted of 5 traditional language exercises, which most of the learners were used to from their school studies. Besides, all exercises except Exercise 4 were tasks containing a prompt. Ellis and Barkhuizen emphasize that "[t]he prompt is constructed in such a way as to elicit the feature that is being targeted" (2005, 39).

The tasks were presented in hierarchical order, from the easiest to the most difficult one. However, it may be noted that the first 4 exercises were compliant with the same intermediate level, while the Exercise 5 required more advanced knowledge. An example of the task set can be found in Appendix 1, though I will give a short description below.

Exercise 1 was a *Question and Answer* task, with ten questions and ten corresponding pictures. The participants had to give answers using prepositions *in*, *at* or *on* with the words under the pictures.

Exercises 2 and 3 were designed as sentence-completion tasks, suggesting the application of a wide range of spatial prepositions. Exercise 4 differed from them primarily in the fact that it required inserting the combinations of prepositions. What is more, it also touched on the topic of *verb+preposition* phrases (phrasal verbs).

In Exercise 4 the participants were asked to choose the correct alternative between the two sentences with prepositions of time. Here I must stress that the main reason why this exercise was added to the research materials is the fact that it contained a number of sentences where negative L1 transfer were expected to be found. Further, in the Results section this issue will be covered more elaborately.

3.2.2 Questionnaire

The second part of research materials is represented by a questionnaire which is mainly directed to discovering the possible range of input the learners are exposed to. There are three main types of questionnaires including those with open questions (respondents decide how to answer them), closed questions (the answer is restricted by the choice provided by a researcher) and mixed ones. Open questions usually allow for more information, but due to that they are more difficult to analyze, while closed questions are less informative but easier to analyze (Ellis and Barkhuizen 2005, 42). I made up a mixed questionnaire with both types of questions, however the open questions in the questionnaire presuppose mostly yes or no answers on the assumption that the participants may add some additional information if they see it fit.

Krashen (2009 [1982], 24) speaks of three sorts of modified input, these are: foreigner-talk (communication with competent language speakers), teacher-talk (language presentation in classroom) and interlanguage-talk (communication with other L2 learners). But taking into consideration the fact that this research is focused

more on extracurricular language input, I decided that the question regarding the proportion of teacher-talk in English would suffice. With this in mind, I included in the questionnaire mainly questions connected with unmodified input. The whole questionnaire consists of 10 questions. Its copy can be found in Appendix 2.

3.2.3 Data collection procedure

Mackey and Gass (2005, 26) strongly recommend obtaining informed consent from L2 learners before starting the data collection. At the same time, they mention that in some countries there might be "suspicion concerning consent forms" (Mackey and Gass 2005, 35). So as to avoid any possible misunderstanding, I decided to follow the common practice accepted in Ukraine, i.e. to obtain oral permissions from the school headmasters, L2 teachers and L2 learners, participating in the research. I assured the participants that all their outcomes will be impossible to identify at any stage of the study, since I did not know the participants' names and had not met any of them before, each set of research materials only contained the identification number, and in future it could not be linked to the task performer in any way.

Data gathering took place in February 2020 in Central Ukraine. The whole procedure of data collection took me one working week. I settled on two comprehensive secondary schools and went there in person. First I met the headmasters and asked for permission to conduct the data collection in their schools. After my request for approval was confirmed, they helped me to find the teachers who would agree to assist in the data collection procedure. On average, there are 4 or 5 English teachers in a common city school. My intention was to find 4 teachers teaching English in 4 different classes in 2 different schools.

After that I agreed with the teachers that I could come to the class during the lesson to explain the procedure to the learners and invite them voluntarily to participate in the research. So as not to interfere in the educational process, the learners were asked to stay after lessons and spare 40 minutes of their time filling in the questionnaires and doing the grammar tasks. Their English teachers also kindly agreed to be present during the experiment.

Each group of participants received detailed instructions on how to complete the questionnaire and do the exercises, which were provided in the Ukrainian language so as to achieve full understanding of the task. In this way, I also wanted to

discourage unnecessary questions being asked during the procedure. All the participants were given numbered sets of materials; thus they could choose whether to begin with the questionnaire or the grammar test. I asked the teachers not to interfere in the process and refrain from prompting, and since I was present there each time I could see to it that my request was fulfilled. It is also worth mentioning that during the procedure, the learners were sitting separately from each other, one at a desk, so as to prevent them from copying each other's work. Upon completion, I expressed gratitude to the learners and their teachers.

3.3 Methodology

The case methods chosen for the present study are based on the theories and findings of well-known scientists, given a detailed account of in the theoretical section of this study. In the empirical part I apply three types of analysis so as to answer the three research questions as envisioned by this study.

3.3.1 Error analysis

To identify the degree of prepositional errors committed by Ukrainian learners of English, error analysis was conducted following the guidelines provided in subchapter 2.1, which means that the errors were identified, described, explained and evaluated. The choice of analysis was motivated by the focal point of the first research question, i.e. I had to provide an extensive analysis of the irregular usages found in the elicited materials. Having explored the theoretical bases of CA and EA, I inclined to sharing the opinion expressed by Saville-Troike (2012, 40) that "[EA] is based on the description and analysis of actual learner errors in L2, rather than on idealized linguistic structures attributed to native speakers of L1 and L2 (as in CA)". Since the goal of this research was to study the committed errors but not to predict them or compare the two languages, EA was considered to be an appropriate tool for this mission. I accomplished all five stages of EA, and I will go into particulars to explain he procedure in full.

The first stage involved **collecting samples of learners' language**. Among three types, widely offered for EA by researchers, a specific sample was chosen, i.e. a limited number of subjects were given the same research materials. The other two

methods of collecting samples were considered as irrelevant as one of them is designed for a large number of participants and several language samples, and another is an incidental sample with one language sample obtained from a single object.

The next stage was **identification of errors**, where errors were separated from mistakes. Corder (1981, 10) noticed that determining errors and mistakes is a difficult task and the process implies a more advanced analysis. In this study, I decided to consider all minor deviations including minor misspelling, as mistakes. All other irregularities were referred to as errors, taking into consideration that they all were related to prepositions or prepositional phrases and also that the advanced analysis of error and mistake division was not envisaged as the purpose of this study.

At the third stage which was aimed at **error description**, all detected errors were first counted. It should be noted that all grammar reference and practice books by Murphy, where I took the tasks for research materials from, are supplied with answer keys to exercises, which was very convenient while checking the elicited data. To determine the error ratio in the total number of elicited tasks, I applied the common formula:

$$\frac{n \cdot 100}{N}$$

Where, in this case, n – number of errors and N – total number of tasks. This very formula was further utilized for all ratio calculations in this study, though with different meanings of n and N. But in any case, n denoted a part of the whole and N – the whole amount.

Next I distributed the discovered errors according to four preselected categories: selection, omission, addition and wrong order, which are described in chapter 2.1. The typology was suggested by Corder (1973), it is widely used by researchers in the EA procedure, and it corresponded to the character of the research data. During error distribution, I distinguished the detected errors according to their features. The prepositions wrongly used in the given context or not meant for certain constructions, as supplied in Murphy's reference books applied for compiling the research materials, were recognized as selection errors. Omitted elements of prepositional phrases, including articles, were reckoned as omissions while the unnecessary elements added into prepositional phrases were seen as additions. The cases with confused word order in prepositional phrases were considered as wrong order errors.

After distributing all discovered errors according to the relevant categories, the stage of **error explanation** came, i.e. I had to distinguish interlingual, intralingual and unique errors. Based on data drawn from the sources mentioned earlier in chapters 2.1 and 2.2, I found it possible to assert that interlingual errors are those caused by the influence of L1 or any other languages, acquired previously or simultaneously. Relying upon this thought I came to conclusion that such errors may be also called L1 interference errors, L1 transfer errors and crosslinguistic errors (CLI errors). To detect errors, I made use of the algorithm for conducting EA, set up by James (1998, 269). I did not follow the whole procedure, but applied Step 7 where it is suggested to carry out a back-translation of erroneous form into L1 and Step 8 which recommends perceiving the error as interlingual provided the translation is good and as intralingual or induced if the translation is not appropriate. In my opinion, it works most effectively when using word-by-word translation.

The next stage was **evaluation of errors**. Though many studies do not include the last step of EA, as it is seen as a separate issue having its own methods of analysis, in this research it is considered as an important means to show the true extent to which Ukrainian learners do commit prepositional errors in writing. Aside from that, the results obtained at this stage will be further applied in defining the interrelation between the level of TL input and the level of errors of each participant, which is the third question to be settled in this study.

After all the errors from elicited materials had been identified, described and explained, I then needed to choose a proper technique for error evaluation. Ellis and Barkhuizen (2005, 67) offer 4 steps to be accomplished for error evaluation. The first two involve (1) selecting the errors to be appraised, and I considered that the character of my research required all located errors to form part of the evaluation procedure; and (2) choosing the criterion to judge the errors, where I settled on the most popular choice, which is error gravity. First, in order not to make things more complicated, I decided to take an easy route, i.e. to determine the gravity of each error and, as a consequence of this, then to divide the errors into two simple categories: significant and insignificant. It would have been a lot more complicated to attribute the detected errors to the mentioned categories. Step 3 presupposes that a set of instructions and evaluation method should be prepared. In the capacity of instructions, I decided to rely on several factors. The prepositional errors were recognized as insignificant in several cases:

(1) When the erroneous form belongs to the same synonymic chain as the correct option. For example, the meanings of spatial prepositions *over* and *above* can be perceived as identical without knowing the corresponding rule restricting the usage of both in certain contexts. Oxford English Dictionary explains the preposition *above* as "expressing position in or movement to a place that is higher" and the preposition *over* as "above, higher up than". Hence, it is natural that the two abovementioned prepositions are often used as interchangeable ones.

(2) When the erroneous choice is used as appropriate in similar contexts and at the same time and under certain circumstances, belong to the same synonymic chain as the correct variant(s). For example, spatial prepositions *in*, *on* ad *at* can cause confusion of application without knowing the corresponding rules or having enough practice with such constructions, since all three may be found in very similar contexts. For instance, *He works in a shop. She works on a farm. They work at school.* One could add many other examples here as well.

(3) The cases of omitted articles. Of course, I must admit that sometimes an omitted article can influence the main sense, especially when there is a pre-story and/or post-story available as in a text or story. But the research data were composed of separate sentences, not depending on each other. Thus, an omitted article might not critically affect the meaning of the construction.

The common features of the aspects mentioned above is that the main message of the sentence which was intended in that particular situation was kept even with an erroneous answer. But on the other hand, the deviant forms which greatly affected or even changed the intended sentence meaning to the opposite from that meant by the author and those which had picture illustrations in the text or were restricted by English grammar rules, were regarded as significant errors.

Step 4 really needs judges to be invited to assist in the error evaluation procedure. Upon reflection, I decided to omit that stage, as I could have recourse to Murphy's reference books ([1990] 2007, 228, 230, 308; [1985] 2012, 242, 248, 274, 362-363, 366) and Grammar of English (2006, 250-257), where the prepositional application rules are described in detail, and also the Oxford English Dictionary providing explanations for most English words. Besides, it seemed reasonable, taking

into account the low level of task complexity in the test and the full-scale character of deciding factors to be considered while defining the error gravity.

3.3.2 Transfer analysis

To explore the CLI from Ukrainian to English using the example of prepositions, it was decided to employ transfer analysis (TA hereinafter). It should, however, be noted that it is always closely connected to EA, as negative transfer, for instance, may be detected in the committed errors only. According to James (1998, 6), TA is "a sub procedure applied in the diagnostic phase of doing EA". Hence, TA is seen as a supplementary procedure within the framework of EA, dealing with learner errors which are presumably resulting from NL influence.

The guidelines for identifying and categorizing the CLI cases were taken from Jarvis and Pavlenko (2008), as in my opinion that work included all-embracing materials to speak about CLI and analyze it.

At this point I had to suggest a hypothesis, that the rather high rate of errors caused by L1 transfer should be found in the collected materials. Two reasons can be distinguished here: (1) applying the language rules from L1, (2) applying the wrong translation from L1. Further, in the transfer analysis section, the matter gets more attention.

3.3.3 Input analysis

The third question raised in this research is as follows: *how does extracurricular input influence the acquisition of prepositions?* To answer this question, I had to trace the connection between the performance level of Ukrainian learners of English and extracurricular language input they are exposed to, applying the content analysis towards the data obtained from questionnaires to see the general picture and comparison approach towards the data obtained from the questionnaires and from the task sets, comparing the amount of input with the points received during error evaluation procedure.

To investigate this issue, I used a larger 'half' of the background questionnaire, where 6 questions out of 10 were aimed at discovering the presence of extracurricular input in participants, while the smaller part served as a background questionnaire. Thus, the questions Nos. 5-10 are related to discovering extracurricular

input and hereafter they will be called *input questions*. The questionnaire form can be found in Appendix 2.

A complex analysis was applied to study the issue of input detection. First, I decided to show the full picture based on the elicited materials, i.e. the amount of positive data regarding extracurricular input received from the whole scope of elicited materials. At this stage, I applied the technique borrowed from content analysis, which offered using the so called *Janis coefficient* (Janis and Fadner 1943, 109) for calculating the correlation between positive and negative items (Semenov, 2020, 196). To choose the right formula, first of all, I had to count all positive and negative answers given to the input questions. I found out that positive answers prevailed, in that case the following formula had to be used:

$$\frac{f^2 - f \cdot n}{r \cdot t}$$

where f = number of positive answers, n = number of negative answers, r = the scope of text content which is directly relevant to the problem being discussed, t = the scope of the whole text (ibid.).

In the second part of the analysis, I had to compare the reported input level of each participant and the test results obtained during the evaluation stage of EA. Before conducting the comparison, I suggested that the learner's test results and input should correlate. Namely, the more input evidence would be found in a questionnaire, the fewer the number of points would be assigned for the prepositional errors committed by the same participant in a grammar test.

3.4 Pilot test and its results

"[A]ll materials need to be pilot-tested, […], in order to ensure that what you want to elicit is in fact what you are eliciting" (Mackey and Gass 2005, 138). Following these recommendations, I conducted a pilot-test of the prepared research materials in order to reduce the risk of any unseen rocks or other hidden hazards which may occur in data collection, to assess the applicability of the chosen analysis methods and also to see if the obtained data would actually address the research questions.

Four Ukrainian learners of L2 English from the eighth and ninth grades were selected to participate in the pilot testing. It allowed me to reckon up the time necessary for the data collection and evaluate appropriateness of the chosen tasks to the questions raised in this study.

Conducting the pilot test of the research materials made it possible to build a number of assumptions for the main study. Firstly, I decided to add the task explanations in Ukrainian language to avoid possible misunderstanding and to allow more time for the task accomplishment. Secondly, one of the exercises was removed from the research data as it proved to be too easy for the learners of this level. Thirdly, as many omitted articles were detected even at the stage of pilot testing, I found it judicious to analyze prepositional phrases containing definite articles as well.

4 Results

In this chapter I present the results of the study obtained by application of the analytical methods outlined in the previous section. First, I display the results depicting the overall performance in the test and revealing the detected prepositional errors, their characteristics and possible sources. Next, I discuss the cases showing the presence of language transfer. Finally, I examine the evidence of any impact produced by language input on the acquisition and introduce the findings on that issue.

4.1 Prepositional errors

This subchapter is devoted to finding the answers to the first question posed in the present research, i.e. *To what extent do Ukrainian speakers of English commit prepositional errors in writing?* It was decided to apply EA for this purpose, and I conducted it following the common practice instructions and recommendations described in chapter 3.3.1. The results obtained during accomplishing all the EA stages are presented below.

      Collecting samples of learners' language. As I mentioned in the section of Data and Methods, 80 learners took part in the data elicitation though I had to end up with 74 samples as the most appropriate for this study. Moreover, after a brief review, I found that 13 participants failed to accomplish the last exercise from the set. Either the time was not enough for them or they found it too difficult. As a consequence, I decided to count the number of tasks: if every set had 44 tasks and those 13 were lacking 8 tasks of the last exercise, altogether I received **3,152** tasks ($61\times44+13\times36=3152$). Thus, this figure was utilized further in some calculations for EA.

      Error identification. At that stage, all deviant forms recognized as mistakes were filtered out, which allowed for progress to the next stage.

      Error description. First of all, I counted all errors in the elicited materials. As a result, **1,536** errors were found. The formula for ratio calculations is displayed in subchapter 3.3.1. Here, $n=1,536$, $N=3,152$, thus, $1,536\times100\div3,152=49\%$. The proportion of errors and correct answers is illustrated in Figure 1.

      Through the process of categorizing the errors by their types, there were found to be 1,044 cases of wrong selection, 461 cases of omission, 29 cases of addition and 2 cases of wrong order. Then I utilized the formula for defining ratio of each error

category; in that case, n = number of errors of certain category and N = total number of errors: (1) selection – 1,044×100÷1,536=68%; (2) omission - 461×100÷1,536=30%; (3) addition - 29×100÷1,536=1.9%; (4) wrong order - 2×100÷1,536=0.1%. The ratio of each error category is shown more clearly in Figure 2.

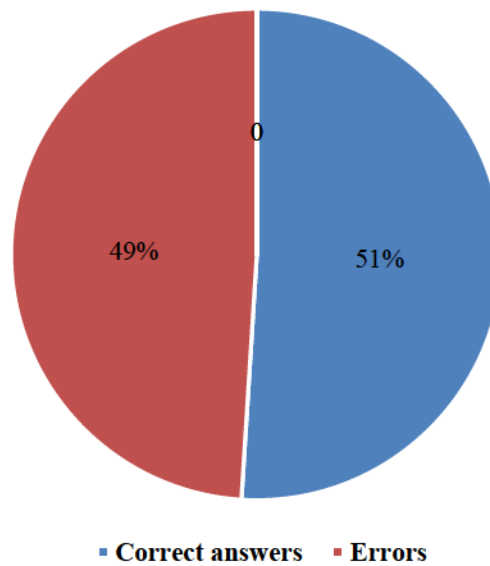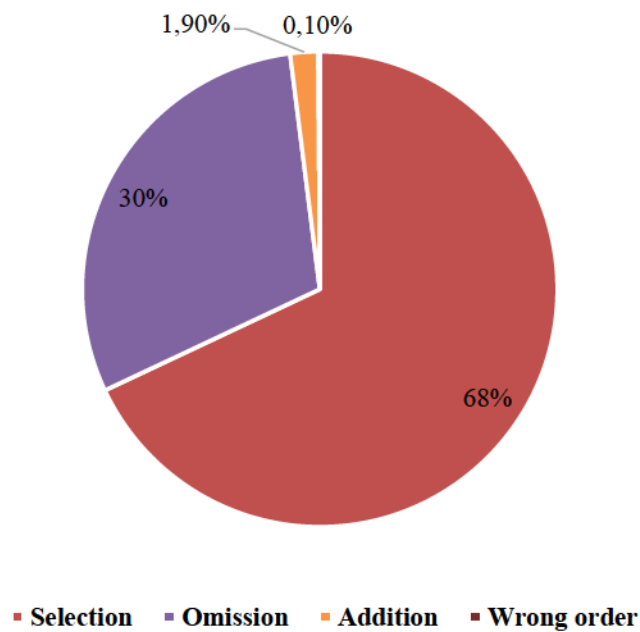**Figure 1.** The ratio of errors in elicited material

Figure 2. Distribution of errors

In Figure 2, the category of omissions includes omitted prepositions or parts of compound prepositions, and omitted articles. For further analysis, I found it more appropriate to separate these two aspects, as both of them needed an individual explanation. Since there were 194 cases of omitted prepositions or parts of compound prepositions and 267 cases of missing articles, adding up to 461 cases, applying the same formula, I defined the ratio for each subcategory of omission errors: (1) prepositions: $194 \times 100 \div 461 = 42\%$; (2) articles: $267 \times 100 \div 461 = 58\%$. These figures are shown in Figure 3. To show the fuller picture of error distribution, I had to find the ratio of each omission subcategory within those 30% occupied by omission errors in the total amount of the found errors. Hence, articles - $267 \times 100 \div 1,536 = 17\%$; prepositions - $194 \times 100 \div 1,536 = 13\%$. The advanced arrangement of errors can be observed from Figure 4.
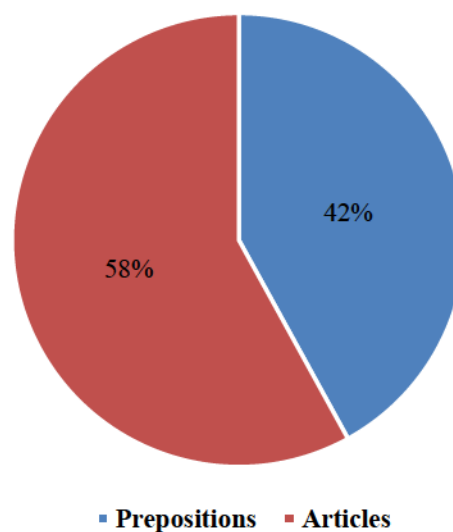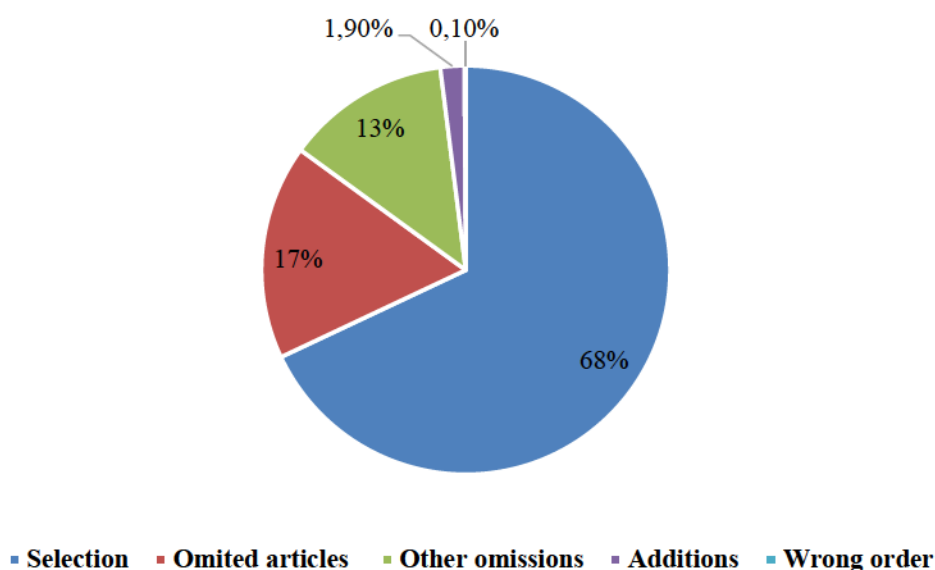
Figure 3. Errors of omission

42%

58%

■ **Prepositions** ■ **Articles**

Figure 4. Error distribution advanced

■ **Selection**   ■ **Omited articles**   ■ **Other omissions**   ■ **Additions**   ■ **Wrong order**

Error explanation. At that stage of EA, I decided to follow the order, in which the errors were classified above, and start with explaining the wrong selection errors. Besides, the number of those errors was more prevalent compared to other types. As it was mentioned before, there were 1,044 errors of selection found, which constituted 68% of all errors from elicited materials. Of these, 102 cases of errors were considered as the ones preconditioned by L1 influence. For instance, the phrases *at Christmas* and *at the weekend* if translated into Ukrainian will look like *на Різдво* and *на вихідних*, which is absolutely correct in Ukrainian. Since in L1, preposition *на* is used and its most common English equivalent is *on*, a learner may decide to apply word-by-word translation in this case, producing an incorrect form. The abovementioned is an example when translation is good, hence such errors can be considered as interlingual. In the interests of empirical study, I will only give some examples of detected errors but in Appendix 3 it is clearly illustrated how errors were counted, classified and categorized. Besides, in subchapter 4.2 devoted to transfer analysis, a more explicit survey on CLI errors is provided.

Speaking of error explanation, I should note that of course it is not so straightforward and explicit. The problem is that some of the assumed L1 transfer errors might also have intralingual origin, i.e. be influenced by TL. For example, such erroneous forms as *got in/into the train* (Ex.3.8) or *got from the car* (Ex.3.4), and *in last June* (Ex.4.8) could also be induced by already acquired L2 rules. If back-

translation is applied, we will get the appropriate Ukrainian phrases *сісти у поїзд* (Ex.3.8) and *вийти з машини* (Ex.3.4), where prepositions of place and movement *у* and *з* are used and their proximate English equivalents are *in/into* and *from* respectively; and *у минулому червні* (Ex.4.8) with a preposition of time *у* which is used in Ukrainian with the names of days, months, years etc. and very often translated to English as *in*. At the same time, the first two cases mentioned above might result from ignorance of rule restrictions, i.e. making an analogy with such expressions as *get in/into the car* or *get something from somewhere*, while the latter one could be from overgeneralization, when a learner might think about the phrase *in June*. These cases are only a small example of how difficult it was to determine the origin of certain errors. As there was no possibility of defining the true source of such errors, I decided to interpret them as patterns of the learners' interlanguage.

Being guided by the instructions mentioned in chapter 2.1, I also tried to distinguish intralingual errors among the errors of selection. For example, into this category I placed such cases of deviation as *swam through the river* (Ex.3.1) and *ran through the road* (Ex.3.5), and *be back to work (Ex.5.2)*, since they didn't produce proper back-translation and could have resulted from faulty overgeneralization in my view. Altogether, I counted 38 cases which I could consider as purely intralingual errors.

**Figure 5.** Selection errors caused by transfer of learning
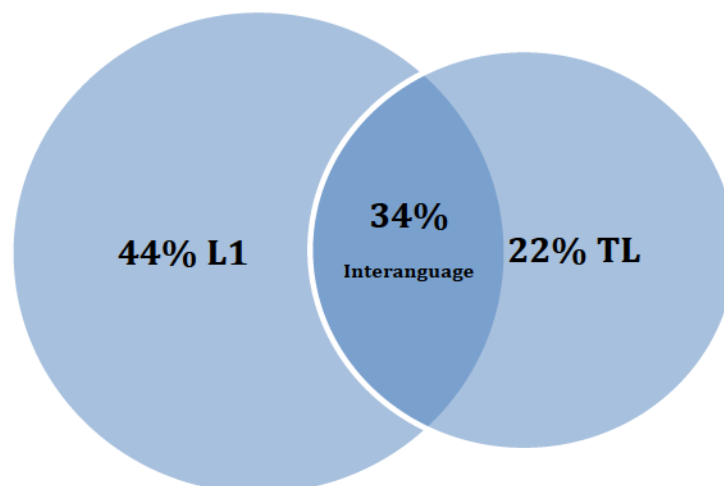
Altogether, I can state that of 231 selection errors resulting from transfer of learning, 78 of them showed evidence of both interlingual and intralingual nature, 51 were intralingual and 102 came from likely L1 interference errors. Thus, the

proportions appeared to be: interlingual (L1) - 102×100÷231=44%; intralingual (TL) - 51×100÷231=22%; interlanguage - 78×100÷231=34%; and its graphic form is represented in Figure 5.

All other cases of errors which I designated as just wrong selection were judged to be unique, i.e. they were induced either by lack of knowledge or by lack of proper instructions received from TL teacher or by any other possible reason. Thus, the sources of wrong selection errors can be shortly explained in Figure 6, where L1 transfer errors constitute 102×100÷1,044=10%; TL transfer errors are 51×100÷1,044=5%; interlanguage cases - 78×100÷1,044=7%; and unique errors (1,044-102-51-78=813): 813×100÷1,044=78%.

Figure 6. Explanation of wrong selection errors

■ **L1 transfer**   ■ **TL transfer**   ■ **Interlanguage**   ■ **Unique**
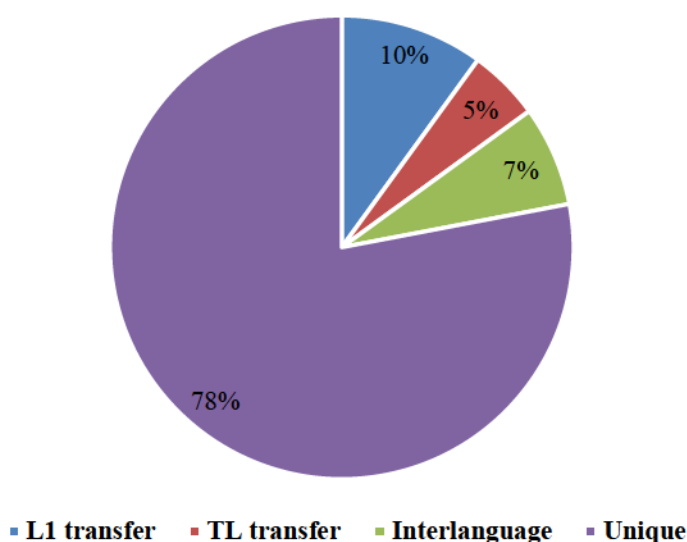
The next error category to be explained is omissions and it amounted to 461 cases. As I have mentioned earlier, a greater part of these errors is represented by omitted articles, i.e. 267 cases. The remaining 194 cases consist of omitted prepositions and other parts of prepositional phrases besides articles. Of these, I counted 60 cases of the omitted simple preposition *of* when part of a composite preposition, as in got *out of the car*, *in front of*, etc. The reason for both errors, omitted article and preposition *of*, can be traced to the simple fact that these grammar categories do not exist in the Ukrainian language. As I explained in chapter 2.4, in Ukrainian the cases of a noun are used to express its relation to other parts in a sentence while in English, prepositions are required for that.

A much deeper analysis is needed to define whether these omissions result from the lack of sufficient instructions obtained during learning or being the part of

learner's interlanguage at this level of TL acquisition. In this research, I decided to regard these omissions as the errors caused by NL influence, but in these circumstances, not because certain similar phenomena are present in L1 and might affect the choice, but because any related concept is absent in the native language system.

Other detected omissions were represented by 134 cases of missing prepositions which I categorized as unique errors and for which I could suggest several different reasons: either a learner was not sure about the right choice or perhaps did not know the correct answer (and so did not accomplish that part of the task), or a preposition could have been merely left out by accident.

I added together the amounts of omitted articles (267) and the omitted prepositions *of* (60). Then I took into account these 327 cases of deviant forms that I regarded as L1 transfer errors. They constitute the following share of omission errors: $327 \times 100 \div 461 = 71\%$, which is shown in Figure 7.

Figure 7. Explanation of omission errors
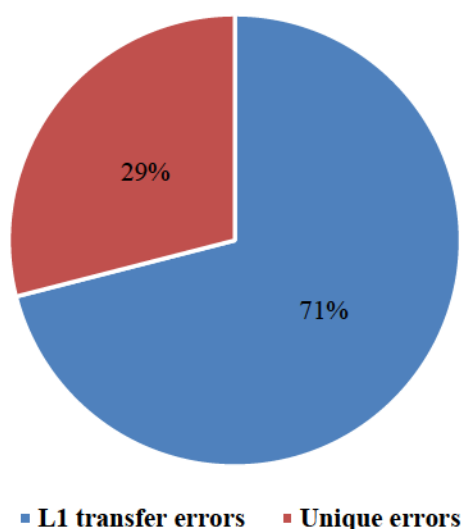
The errors of addition found in the elicited research materials include 29 cases of deviant forms. These additions, in the main, comprise unique errors, such as unnecessary words added into the gap-tasks, for example, *They got ~~come~~ in the train* (Ex.3.8). However, a few cases can be explained as intralingual errors. These are *behind ~~of~~* (Ex.2.1, 2.7) and *in ~~the~~ front of* (Ex.2.3, 2.6), where added elements could result from faulty generalization. It is possible that a learner might have had in mind the phrase *in front of* when adding *of* to the preposition *behind,* and perhaps the phrase

in the middle of when adding an unnecessary definite article in the second faulty phrase mentioned. Altogether, I detected 10 cases of TL transfer errors in the category of additions, hence their ratio would constitute: $10×100÷29=34\%$. The relation between the two types of errors found in the category of additions is shown in Figure 8.

Figure 8. Explanation of addition errors
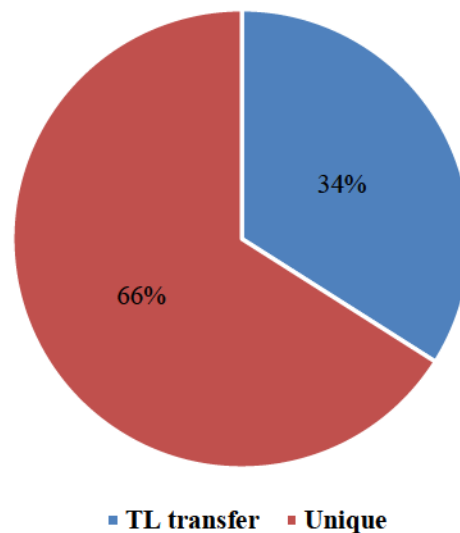
The fourth error category is that of wrong order errors, and only two cases of these were found in the elicited materials. In Exercise 1 of the research data, the participants could voluntarily decide whether to give a short or full answer. One of the participants, while giving complete answers, committed two wrong order errors in the first and second sentence: *Sue in the sales department works* (1); *Sue on the second floor lives* (2). If the same error had been observed from that participant in a similar sentence of the same exercise: *Kate works on a farm* (10), I could make an assumption that those were examples of either interlanguage or L1 transfer, since in Ukrainian, the word order in a sentence is very flexible. As it was not so, I added those cases into the category of unique errors.

As all categories of the detected error cases have been explained in detail, I deem it appropriate to show the ratio of the abovementioned error sources which I consider reasonable based on the application of generally accepted techniques. Besides, such an arrangement will be more suitable when drawing conclusions regarding the first research question, and will take place also in the elaboration of the second research question. Firstly, I have to identify the number of errors belonging to

a certain type of error source: interlingual – 102 (selection) +327 (omission) =429; intralingual – 51 (selection) +10 (addition) = 61; interlanguage – 78 (selection); unique – 813 (selection) + 134 (omission) + 19 (addition) + 2 (wrong order) =968. A more comprehensible way to see the numbers of errors distributed according to their origin is presented in Table 1.

Table 1. Distribution of errors according to their origin

	Interlingual	Intralingual	Interlanguage	Unique
Selection	102	51	78	813
Omission	327			134
Addition		10		19
Wrong order				2
Total	429	61	78	968

Secondly, I needed to determine the ratio of each error source in the total amount of detected errors (1,536): interlingual – 429×100÷1,536=28%; intralingual – 61×100÷1,536=4%; interlanguage – 78×100÷1,536=5%; unique – 968×100÷1,536=63%, which is vividly demonstrated in Figure 9.

Figure 9. The relation among error sources
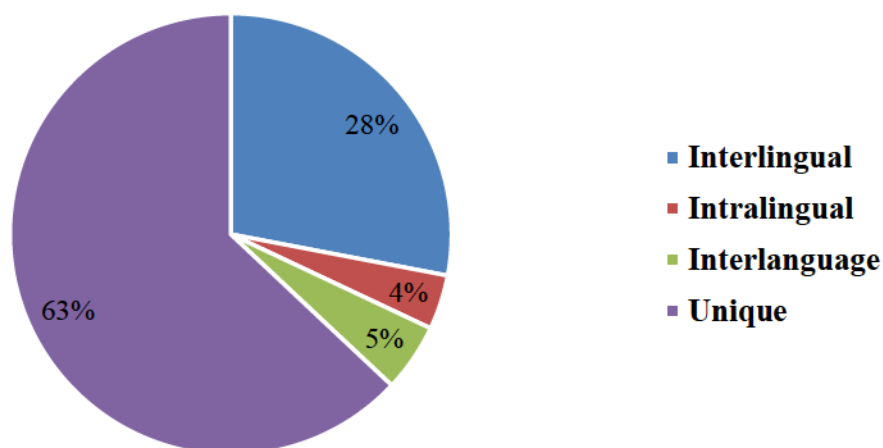
Error evaluation. The detailed description of those factors that influenced the way I undertook that procedure is given in the section of Data and Methods. In

general, those incorrect forms which did not greatly affect the main message of the sentence were rated as insignificant, and here I added such errors as omitted or wrong articles, partial omissions (*got out ... the car* (Ex.3.4), *in front ...* (Ex.2.3, 2.6)), wrongly selected prepositions (being synonyms with correct alternatives and usually resulting from L1 influence, where the idea was still clear, as in *works at the sales department* (Ex.1.1), *fell from the shelf* (Ex.32), etc.), and the unnoticed second correct options in Exercise 4, where some tasks had two correct answers (for example, *I'll see you on Friday* and *I'll see you Friday* – both are correct).

The errors that interfered in the process of conveying the intended messages by the sentences in research data form, were recognized as significant. Those included, for example, the phrases: *The dog swam in the river* (Ex.3.1) or *Suddenly a car came to the corner* (Ex.3.6), etc., which contrasted with the different illustrations in the pictures showing that *The dog swam **across** the river* and *Suddenly a car came **round** the corner*.

The errors adjudged as being insignificant were given 1 point, while significant errors received 2 points. Thus, the more significant errors were found in a data sample, the higher the proportion accorded in the sample.

As it was mentioned earlier, 1,536 errors were found altogether. There was one detail, which I also referred to at the beginning of this subchapter. 13 participants failed to fulfill the last exercise in the research materials. Since that exercise comprised 8 tasks, the answers to which were missing in 13 elicited materials, I decided to add 8 points to each of those 13 samples, consequently equating them in some way with other samples. Through this process, 8 errors were correspondingly added to each of such samples. Thus, I received a total of 1,640 errors for consideration. In conjunction with that, all the elicited samples could be regarded as accomplished further in this part of EA, which gave the sum of 3,256 research tasks.

After evaluating all detected errors in elicited tasks and assigning the corresponding rates to each of the samples, I divided the latter according to the received rates into three categories: (1) low rate – 0-20 points; (2) medium rate – 21-40 points; and (3) high rate – 41-60 points. There was only one sample where the rate exceeded 60 points, so I didn't include it into any category but took it into consideration while displaying the sizes of all rate categories (Figure 10). Therefore, I counted a number of samples in every rate category and discovered that 17 samples could be placed into a category of low rates, 40 samples into a medium-rate category,

and 16 samples into a high-rate category. Then I defined each rate category as a proportion of the total number of samples: low rate – $17 \times 100 \div 74 = 23\%$; medium rate - $40 \times 100 \div 74 = 54\%$; high rate - $16 \times 100 \div 74 = 22\%$; and out-of-category rate – $1 \times 100 \div 74 = 1\%$.

Figure 10. Ratios of evaluation categories

■ **Low-rate** ■ **Medium-rate** ■ **High-rate** ■ **Solitary case**
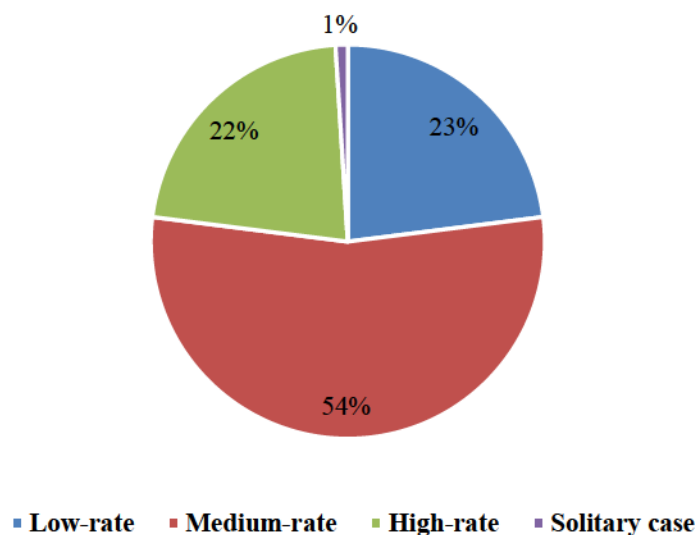
Afterwards, I counted the total number of errors which received 1 point, i.e. insignificant errors, and the sum of errors evaluated by 2 points, i.e. significant errors. The results showed that insignificant errors prevailed (971 cases), while significant errors were in a minority (669) cases. Altogether, they resulted in: $971 + (659 \times 2) = 2,289$ points.

In graphic form, the basic outline of error evaluation procedure performed in this research is illustrated in Figure 11.

To answer the first research question, I followed the entire EA procedure having accomplished all five stages of EA. The error value of 49 percent shows that Ukrainian learners of English do commit a lot of prepositional errors in writing. However, there are certain aspects to be added here to make the answer comprehensive and full-scale, and this will be done in the Discussion section where the analysis results will be interpreted.

Figure 11. Error evaluation results
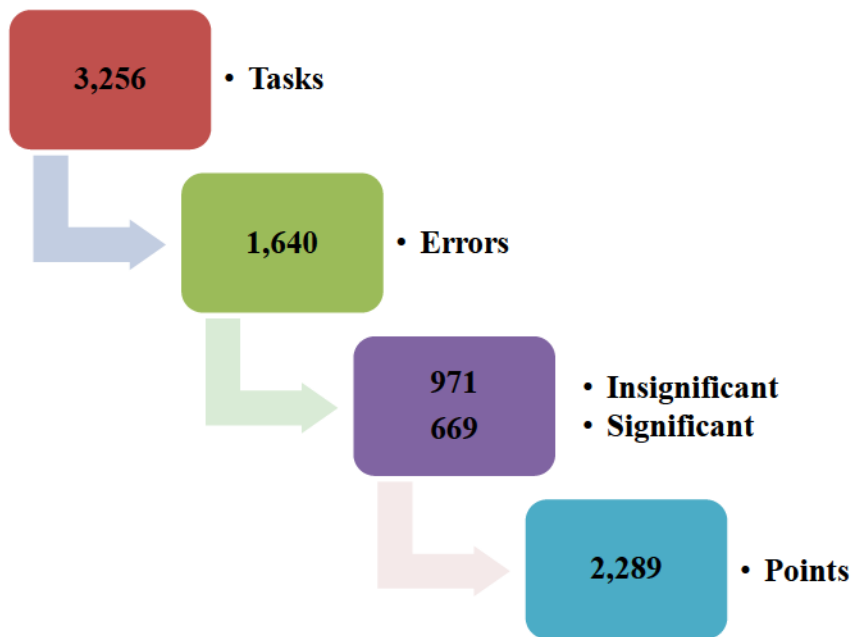
4.2 The evidence of crosslinguistic influence

This subchapter is in a sense the EA follow-up. According to James (1990, 489), transfer analysis is "a sub discipline within error analysis which rests upon the assumption that certain deviances in learner production are the result of NL transfer". Earlier on in the course of the error explanation stage in EA, I distinguished the erroneous cases which I considered had been induced by CLI. I have provided only a few examples of such cases but all the detected transfer errors will be given a thorough survey hereinafter.

In an effort to answer the second research question (What is the evidence of L1 (Ukrainian) influence in the acquisition of L2 (English) linguistic items?), I separated out the cases with apparent CLI evidence, tried to determine the possible reasons for their occurrence and characterized them according to the scheme provided in subchapter 2.1.

As I suggested in subchapter 3.3.2, two main reasons for CLI occurrence can be singled out when speaking about prepositional errors and these are (1) applying the language rules from L1 and (2) applying the wrong translation from L1. To start with, I handled the cases which as I thought were resulting from false translation from NL.

This decision was caused by applying the back-translation verbatim into Ukrainian, which in turn led to obtaining sentences with appropriate content. I deemed such to be examples 1-9 which are given below with explanations and possible translations.

(1) *A book fell from the shelf (Ex. 3.2, correct answer: fell off the shelf) – 29 cases. *Книга упала з полиці.*

(2) *We often have a short holiday on Christmas (Ex. 4.5, correct answer: at Christmas) – 26 cases. *У нас часто бувають короткі канікули на Різдво.*

(3) *What are you doing on the weekend? (Ex. 4.6, correct answer: at the weekend) – 24 cases. *Що ти робитимеш на вихідних?*

(4) *Emma is sitting before Barbara. Frank is sitting before Colin (Ex. 2.3, 2.6, correct answer: sitting in front of) – 10 cases. *Емма сидить перед Барбарою. Френк сидить перед Коліном.*

(5) *They got to the train (Ex. 3.8, correct answer: got on the train) – 5 cases. *Вони зайшли до поїзда.*

(6) *Colin is standing after Frank. Alan is standing after Donna (Ex. 2.1, 2.7, correct answer: standing behind) – 4 cases. *Колін стоїть за Френком. Алан стоїть за Донною.*

(7) *Frank is sitting at Emma. Donna is sitting at Emma (Ex. 2.2, 2.5, correct answer: sitting near or sitting next to) – 2 cases. *Френк сидить біля Емми. Донна сидить біля Емми.*

(8) *A book fell with the shelf (Ex. 3.2, correct answer: from the shelf) – 1 case. *Книга упала з полиці.*

(9) *A woman got with the car (Ex. 3.4, correct answer: from the car) – 1 case. *Жінка вийшла з машини.*

The erroneous preposition forms used in the abovementioned examples either relate to the proper prepositions as synonyms in the English language, or the misused and correct prepositions are homonyms in Ukrainian language, which allowed for insisting on the presence of CLI. Altogether, I found 102 cases of wrong translation.

The examples 10-13 represent the transfer errors caused by the false application of the rules from NL since in UL it is not required to add the preposition *of* before the noun in genitive case while it is so in EL.

(10) *Emma is sitting in front Barbara. Frank is sitting in front Colin (Ex. 2.3, 2.6, correct answer: in front of) – 14 cases.

45

(11) *A woman got out the car (Ex. 3.4, correct answer: out of the car) – 13 cases.

(12) *The cat is on the top stairs (Ex. 1.5, correct answer: on the top of the stairs) – 15 cases.

(13) *The dog is in the back car (Ex. 1.6, correct answer: in the back of the car) – 18 cases.

There were 60 cases where the omitted preposition *of* can be detected. Another case which I also decided to refer to as to the wrong-rule influenced one, was the multiply omitted article in the order of 267, and the quantity of cases totaled 327. Again, the quantity of cases showed such a high value most probably due to the absence of the article category in UL.

There was also one more group of errors distinguished during the error explanation in EA - the cases where it seemed difficult to define whether they had CLI origin or were influenced by TL, and so they were reckoned as the cases belonging to the area of transitional competence. For transfer analysis, since it was difficult to affiliate those errors and there was a deeper analysis needed to prove if they could represent the interlanguage or TL transfer, I decided to rank them as the regular errors conditioned by the L1 transfer. These erroneous forms are shown in Examples 14-17, and supposing that they exemplify transfer errors, Examples 14-16 contain 54 cases caused by false translation while Example 17 represents 24 cases with wrong rule application.

(14) *A woman got from the car (Ex. 3.4, correct answer: out of the car) – 15 cases. *Жінка вийшла з машини.*

(15) *A plane flew above the village (Ex. 3.3, correct answer: over the village) – 11 cases. *Літак пролетів над селом.*

(16) *They got in/into/inside the train (Ex. 3.8, correct answer: they got on the train) – 28 cases. *Вони сіли у поїзд.*

(17) *He left school in last June (Ex. 4.8, correct answer: left school last June) – 24 cases.

Despite the fact that the deviant forms above showed the obvious features of both NL and TL transfer, the same L1 features did not allow me to ignore those cases in transfer analysis.

After stating the possible CLI sources, I categorized the CLI types following the guidelines envisioned in subchapter 2.1. The results are in Tables 2 and 3.

Table 2. Detected cases of CLI through 10 dimensions (1)

Transfer cases conditioned upon wrong translation									
Area of language knowledge/use	Directionality	Cognitive level	Type of knowledge	Intentionality	Mode	Channel	Form	Manifestation	Outcome
Semantic	Forward	Conceptual	Implicit	Intentional	Productive	Visual	Verbal	Overt	Negative

Table 3. Detected cases of CLI through 10 dimensions (2)

Transfer cases conditioned upon wrong rule application									
Area of language knowledge/use	Directionality	Cognitive level	Type of knowledge	Intentionality	Mode	Channel	Form	Manifestation	Outcome
Syntactic	Forward	Linguistic	Implicit	Intentional	Productive	Visual	Verbal	Covert	Negative

As can be seen from Tables 2 and 3, in the course of CLI I reached the conclusion that the detected transfer cases had the same properties except for the three categories. It can be easily explained by the similarity of the tasks in research

materials and the uniformity of research device, i.e. prepositions and prepositional phrases.

Now I will explain my decisions regarding the specified CLI types. Wrong translation cases were included in the semantic area of language knowledge and use, since semantics is a part of linguistics dealing with word meanings; a faultily translated preposition will lead to the meaning being faultily understood. Omitted prepositions and articles which represent the cases of erroneous application of L1 rules, were counted in the syntactic area of language knowledge and use, because syntax rules determine how words combine into phrases and sentences; omitted elements are attributed to sentence structure. The transfer directionality is in both circumstances forward, i.e. CLI occurred from L1 to TL. Wrong translation could result from a false perception created, and so the cognitive level is conceptual. At the same time, omitted elements invite the assumption of the linguistic cognitive level. I settled upon the implicit nature of knowledge in reliance upon Jarvis and Pavlenko (2008, 23), who stated that "CLI effects are often more evident where implicit knowledge is involved". The detected transfer cases were recognized as intentional, since they were seen as those choices resulting from the adoption of the corresponding decisions, i.e. the choice of a preposition or the choice to omit an element. The productive mode is characteristic for such language skill as writing and as the research materials were in written form, I found visual channel as the most logical description of transfer channel against this background. The verbal form of transfer is explained by the verbal form of research materials. According to Ringbom (1987, 50; 1993, 49) in Jarvis and Pavlenko (2008, 25), overt transfer is commonly found with the elements existing in both languages, source and target; while the covert type of transfer occurs in the situations when a learner either relies on the elements from L1 not existing in TL or omits the TL elements which are not present in L1. Hence there are different types of CLI, overt and covert, mentioned in the manifestation category. Lastly, it is noticeable that all the CLI cases mentioned above resulted in errors, thus proving the evidence of negative transfer.

However, I also managed to trace the presence of positive transfer introduced by one sole case, but in 28 samples. That was the case when the preposition translated from NL proved to be appropriate and worked in a better way. Of course, as a rule with positive transfer, I could not be entirely sure and insist on this assumption, but

the other considerations observed in the elicited materials during the EA, like the low level of knowledge regarding the preposition rules and frequent occurrence of translated prepositions, allowed me to draw an inference that the correct answer displayed in Example 18 could be the evidence of positive transfer.

(18) Kate works on the farm (Ex. 1.10) – 28 cases. *Кейт працює на фермі.*

The example of transfer above can be characterized as semantic, forward, conceptual, explicit, intentional, productive, visual, verbal, overt, and positive.

Thus, in total I found 18 sources of CLI evidence, 12 of them being considered as the ones resulting from wrong translation from UL into EL and those included 156 cases; the other 5 of them, being reckoned as the ones arisen from the false application of L1 rule towards TL constructions, comprised 351 cases; and 1 source of positive transfer due to the appropriate translation which consisted of 28 cases. Figure 12 illustrates the elaborate ratio of L1 transfer sources while the whole percentage of CLI cases can be seen in Figure 13.

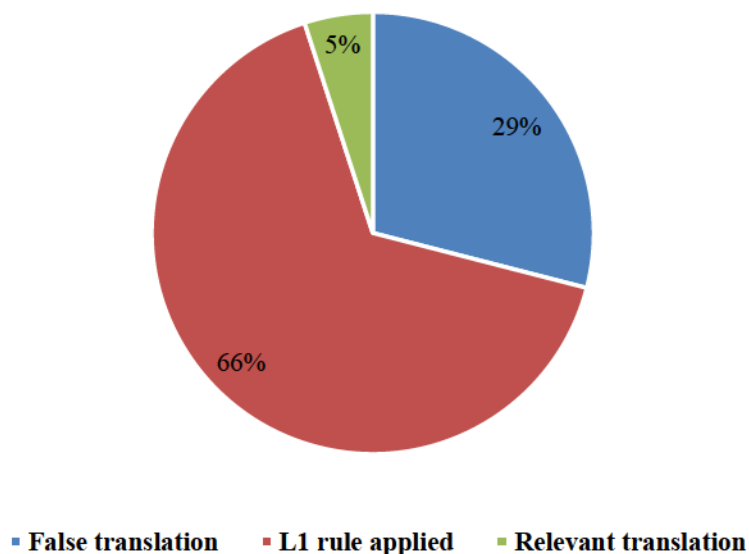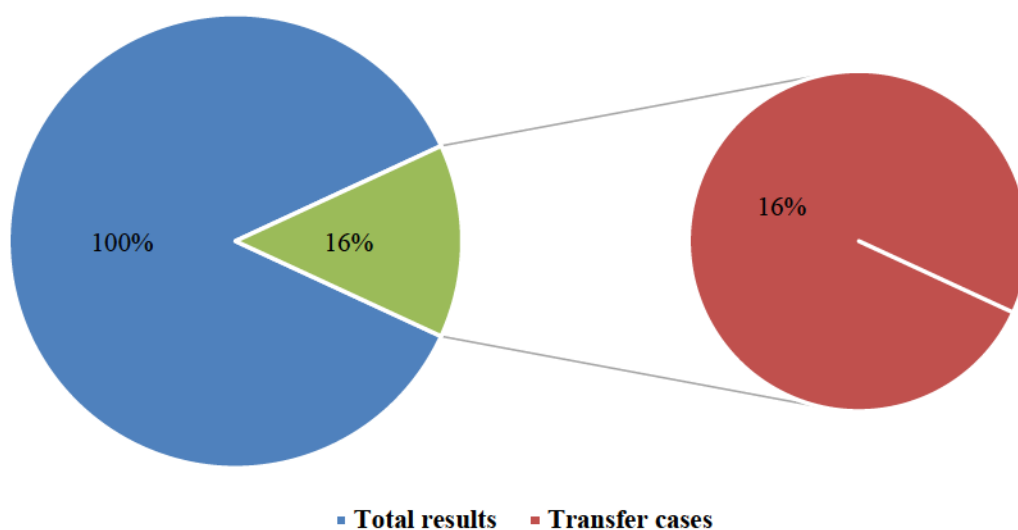**Figure 12.** The relation among L1 transfer sources

False translation ■ L1 rule applied ■ Relevant translation

Figure 13. L1 transfer ratio in the elicited materials

■ **Total results**　■ **Transfer cases**

It is safe to say that the CLI effects found in the elicited research materials have been given a thorough analysis and its results are displayed in detail above. I should add that discussion of the received results will be presented in chapter 5.

4.3 Extracurricular input and acquisition of prepositions

To find an answer to the third research question, I traced the connection between the performance level of Ukrainian learners of English and extracurricular language input that they are exposed to, applying *content analysis* to the data obtained from questionnaires to see the general picture, and *comparison approach* separately to every single set of data elicited from each participant, when the amount of input was compared with the information gained.

For input analysis, I processed the data, contained in the questionnaires which had been included, into research materials. Using the formula, borrowed from content analysis and explained in subchapter 3.3.3, I determined the portion taken up by input evidence in the answers of the research participants. In the matter of this study, f=240, n=204, r=444 (6 answers in each of 74 samples), t=740 (10 answers in each of 74 samples). Hence, $(240^2-240\times204) \div (444\times740) = 0.03$. From this it follows that the coefficient of positive data relevant to extracurricular input contained in the elicited materials is equal to 0.03. However, it should be noted that such a low value was also

influenced by a relatively high amount of negative answers as well as the rest of the text which was included in the analysis.

Altogether I had to deal with 74 questionnaires, each of them containing 10 questions. Questions 5-10 demanded answers which indicated the presence or absence of extracurricular input, and these were referred to as input questions. The 240 positive answers to input questions were distributed as follows with the question numbers indicated in brackets: only 11 subjects used EL abroad (5), 65 subjects used English as a means of communication in social media (6), 49 watched videos in English (7), 57 played computer games with English interface (8), 3 used English while communicating with relatives from abroad (9), and 51 practised English outside school (10). These figures are illustrated as percentages in Figure 14.

Figure 14. Distribution of positive input answers
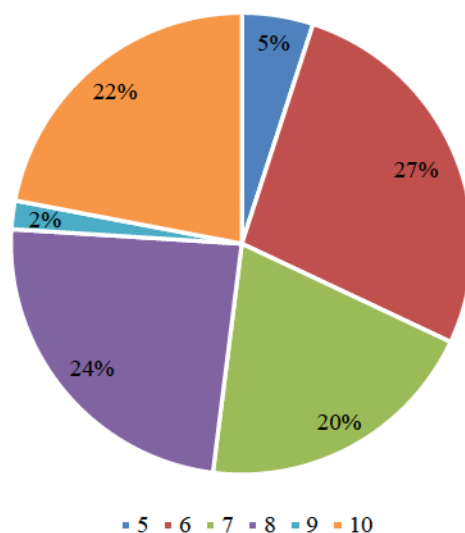
Next I turned to any possible interrelation between the amount of input by virtue of the questionnaire data and the level of performance in the exercise set results as a means of comparison approach. Despite the fact that the input questions were composed as open-end questions, they basically required only short yes or no answers, yet with the possibility of adding more information if so desired. Every positive answer to one of the questions 5-10 proved the existence of a certain amount of extracurricular input received by a participant. In such a way, I could estimate the level of input for all participants. For that reason, every questionnaire received a code from 0 to 6, according to the number of positive answers to these 6 questions. After that, I counted the amounts of samples assigned to each code, i.e. the quantities of questionnaires having from 0 to 6 positive input answers given by the participants.

The distribution of samples according to the assigned codes is presented in Table 4, while the resulting proportions are displayed in Figure 15.

Table 4. Distribution of the collected samples by assigned codes

Code	0	1	2	3	4	5	6
Quantity	1	3	5	8	20	20	17

Figure 15. Percentage ratio of input codes
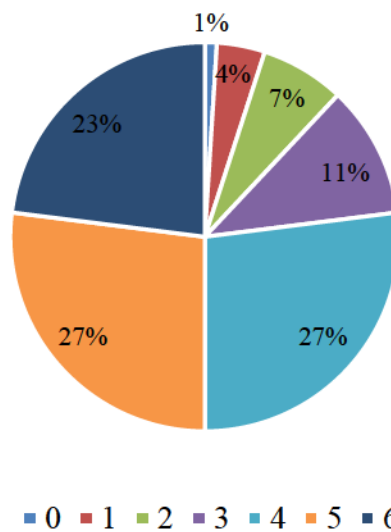
As it was mentioned in Chapter 4.1, all detected errors in the task set of the research materials were evaluated, and every sample received a rate based on the sum of significant and insignificant errors. After that, the rates were categorized into three main categories: low – 0-20 points, medium – 21-40 points and high – 41-60 points. In addition, there was one more category 60+ which included only one case. In EA the numbers of cases in each category were counted; using the comparison approach I needed to assign all categories according to the 6 designated codes. It was assumed that the samples with higher indices in codes would show the lower indices in rates, or in other words, the more there were positive answers to input questions the fewer there would be omitted errors, proving in such a way the influence of input on academic performance in TL. In Table 5 it is shown how many samples of each rate category received a certain code.

Table 5. Distribution of rate categories by received codes

Codes / Rate categories	0	1	2	3	4	5	6
0-20					1	7	9
21-40		3	3	3	10	13	8
41-60	1		1	5	9		
60+			1				

Code = number of positive input answers in one sample
Rate = number of points received for the committed errors

The figures presented in Table 5 show that the codes with higher indices, that is 5 and 6, were denoted by samples belonging to low-rate and medium-rate categories, while lower indices were given to the samples of medium-rate and high-rate categories. Any of the samples having from 0 to 3 positive answers to the input questions had less than 21 points for the committed prepositional errors, and any of the samples having 5 or 6 positive answers had more than 40 points assigned to them. In other words, those participants who gave more positive input answers had fewer errors in their grammar tests.

The analysis conducted showed a relatively small degree of extracurricular input experienced by Ukrainian learners. However, the obvious relation between the input amount and handling of English prepositions was observed. The results obtained re input analysis will be further discussed in the next chapter.

5 Discussion

The purpose of this study was to investigate to what extent the Ukrainian learners of English know and understand English prepositions and how L1 affects the acquisition of TL prepositions. Also the influence of input on the acquisition of prepositions was studied. In this section, the results of the research presented in the previous chapter as well as the efficacy of the applied methods will be discussed in order to answer the research questions outlined in chapter 3.

The first research question was focused on determining the extent to which Ukrainian learners of English commit prepositional errors in writing. It was decided to examine the learners who were at the intermediate level of EL acquisition, and so students of the eighth and ninth grades were invited to participate in the study. 80 participants were given a set of exercises but due to the circumstances indicated in subchapter 3.1.3, the data from 74 of them were recognized as suitable for analysis. The exercises for the grammar test were taken from Murphy's practice books ([1990] 2007, 229, 231; [1985] 2012, 243, 249, 275) meant for elementary and intermediate level English students. Judging by the learners' performance, I can say that the choice of research materials was right and appropriate as only 13 participants failed to accomplish the last exercise in the test, and that was the most difficult task in the set.

The overwhelming evidence of the essential role played by EA in linguistics was repeatedly established in many studies. In this research, it has served as an effective tool not only to define the extent of errors committed by Ukrainian learners of English in writing, but to categorize them, explain their presumed origin and finally evaluate the seriousness of the detected incorrect forms. In the present study, I relied on Corder's works (1967, 1981) concentrated on the issue of errors and error analysis, where the call to understand L2 learners' errors as "sources of insight into the learning process" (Saville-Troike [2006] 2012, 41) fulfilled my intention not only to determine the amount of errors in the research data but also to look into the reasons and circumstances lying behind them.

Furthermore, the results obtained from the research materials allowed me to conduct the EA in full accordance with the envisioned procedure. From the total amount of 3,152 tasks accomplished, I detected 1,536 prepositional errors, thus setting the error ratio at 49%. That value displayed the extent to which Ukrainian learners of English commit prepositional errors in writing. That figure could be

considered to be very high; and that view provided my grounds for going behind the possible reasons which had caused the presence of so many prepositional errors committed in the test, even though it corresponded to the expected level of language knowledge and could have been considered to be relatively easy. However, this issue is discussed a little further on in this section.

The classification of errors proffered by Corder (1973) met expectations, and the detected deviant forms were distributed according to their types. The greatest value was represented by wrong selection errors; and that fact also attested to the claim regarding the high number of errors in the elicited materials. Omitted element can be sometimes explained as chance or mishap and then be designated a mistake, while wrong selection might rather suggest simply not knowing the correct answer or taking the wrong form as the proper one, thus resulting in error.

Now I will proceed with discussing the possible reasons which could lead to a particularly intense occurrence of errors in the elicited materials. In the EA, four sources were distinguished, i.e. interlingual (L1 influence), intralingual (TL influence), interlanguage and unique. Most of the errors were naturally recognized as unique, since their origin was difficult to define. I suggested earlier that a relatively high presence of CLI errors, and the ratio of 28% proved that assumption. "There is substantial evidence to indicate that the actual distance between the native and the target languages acts as a constraint on transfer" (Ellis 1994, 327). A number of studies (for example, Ringbom 1976; 1978; and 1987) have proven that the learners whose L1 is more distant from EL, commit fewer L1-based errors, i.e. manifest less negative transfer, than those whose L1 is closer to EL. Despite all the lexical and grammatical distance between UL and EL, the presence of prepositions in both languages and the similarity in their typology (described in subchapter 2.4) struck a chord as negative transfer, which constituted almost a third of all detected errors. As I hypothesized in subchapter 3.3.2, the participants applied both wrong translation from NL and rules existing in L1 but not present in TL. The transfer cases were elaborately analyzed and discussed in subchapter 4.2, so I pass on to other error reasons.

It must be noted that CLI was not the only cause which led to negative transfer. 4% of errors showed the signs of intralingual influence. Brown (1980, 162) points out to a fact that interlingual transfer usually dominates in the early stages of language learning, but with further acquisition of the language system, the transfer within the TL becomes more frequent. Since the participants who took part in the

research were at the intermediate stage of learning, it would have been logically consistent to disclose more cases of intralingual transfer.

At the same time, erroneous forms that combined the features of both, L1 and TL transfer, were found within the data, and it seemed problematical to adopt any alternative. In fact, 5% of all deviations displayed the features inherent with interlingual and intra- lingual influence. Therefore I assigned a separate category for those errors and chose to reckon them as interlanguage instances. In this way I combined the theories about the transfer of learning (Richards and Sampson 1974; Bransford, Brown, and Cocking 2000) and interlanguage or transitional learning (Corder 1967; 1981; Selinker [1972] 1974; 2014), accepting the theories mentioned and on the basis that that both phenomena are interrelated. I must admit that all the mentioned error sources were specified only according to the features displayed by the detected errors and are in fact presumptive but not exact. Ellis and Barkhuizen (2005, 66) point out that a lot of errors may be explained in reference to multiple sources and advise to be careful when naming the cause of a certain error, so I tried to follow that suggestion during the EA procedure.

The last stage of EA was centered on evaluation of the errors from elicited data. Though this part of EA is usually considered as "a supplementary procedure for applying the results of an EA" (Ellis and Barkhuizen 2005, 67) and often even omitted in EA, I looked at this matter as an important resource for further investigation and thus as a significant EA tool to give a comprehensive answer to research questions. At this stage, I discovered that a great deal of the errors being evaluated were recognized as insignificant, i.e. the intended message still could be delivered despite the present deviations. More about the system of error evaluation applied can be found in subchapter 3.3.1.

On this basis, I can draw the following conclusions from analysis devoted to the first research question:

(1) Ukrainian learners of English do commit a lot of prepositional errors in writing. Most of the explored errors were recognized as unique. The influence of poor performance in native language by some participants is possible here, but this has not been investigated in the present study, thus I claim that it is only a feasible theory based on my observations.

(2) A relatively high amount of L1 transfer was assumed, and it substantially overwhelmed the cases of TL transfer, regardless of the fact that the

research participants were intermediate level learners. That might be explained by common language instructions in Ukrainian language widely used by English teachers during lessons in Ukrainian schools.

(3) The prevailing number of the errors which have been perceived as insignificant does not speak well for the grammatical correctness displayed by Ukrainian learners, but it counts in favour of the ability to transfer the main idea of the message even by means of erroneous forms.

Within the framework of the second research task, the present study has given an account of the phenomenon of CLI and cast some light on the effects produced by L1 transfer on the acquisition of L2 prepositions. The hypotheses regarding the CLI dependence on language distances fall into two main directions; the one supporting the idea that transfer is more likely to be observed in the two close languages (for example, Corder 1967, 1973, 1981; Albert and Obler 1978; Arabski 2006), while the other says that distance fosters more impediments. For instance, Dechert (1983) and Ellis (1997) claim that the more L2 differs from the learner's L1, the more difficult will be the process of its acquisition thus resulting in a stronger focus on the native language. The amount of transfer cases revealed in this research endorse the second position, as Ukrainian and English are relatively distant languages.

Another controversial assumption connected with CLI involves the assertion that the presence of transfer diminishes when language knowledge increases (for example, Taylor 1975; Corder 1978). The number of interlingual errors discovered was testimony to L1 transfer being present even at the intermediate and upper intermediate level of learning EL, which made it possible to support the ideas expressed by Ellis (1994, 330-331): firstly, that one cannot be sure that the errors emerging at the beginning of language acquisition will eventually disappear and secondly, that some interference errors are mixed in with acquiring new language elements. So, perhaps, 'the possibilities of transfer increase as knowledge of the second language increases" (Klein 1986, 27 in Ellis 1994, 331).

As I have already mentioned in the previous subchapter, both my hypotheses, suggested in the Methodology section regarding the relatively high amount of CLI cases and explaining the CLI sources, found support during the transfer analysis. In the total quantity of the detected deviations, L1 transfer errors in the number of 429 constituted 28%. I considered that there were 2 main reasons lying behind the CLI cases; (1) wrong translation from L1, and (2) a false L1 rule application which

amounted to 102 and 327 cases respectively. Arabski (1979 in Ellis 1994, 312) in his Polish-English corpus study decided not to consider omitted articles as transfer-induced errors, explaining that no article category in Polish offers nothing to transfer. However, I decided to include those cases with omitted articles in the category of CLI errors relying on Ellis's (1994, 312) claim that "…the absence of a structural feature in L1 may have as much impact on the L2 as the presence of a different feature".

For L1 transfer analysis, that was my decision despite the dual character of some detected errors that suggested they could also be CLI errors. This position came from observation of a significant difference between the cases of interlingual (28%) and intralingual (4%) errors. In addition, though it was difficult to decide whether those errors were interference-related or developmental, the fact that the same errors were observed in participants from different groups confirmed rather their transfer origin than developmental nature. "Before transfer can be dismissed, it is necessary to demonstrate […] that the L1 is indeed having no effect" (Ellis 1994, 311). With that in mind, I added 54 cases to category 1 and 24 to category 2, thus altogether the results showed 507 cases of CLI errors, of which 156 were cases of erroneously translated prepositions and 351 were cases of incorrectly applied rules from the NL.

I can suggest one fairly obvious reason for obtaining such a high value of CLI presence in the elicited materials. For, in most Ukrainian schools, it is common practice to teach the English language in the native tongue. The language rules are explained in Ukrainian, and new words and phrases are usually translated rather than explained with the help of other pre-acquired words. In consequence, a foreign language is learnt in close relationship to the native tongue and new knowledge is built on associations [whether taught or assumed] with native tongue rules and properties.

The third and last goal, set out in the study, pointed to discovering the possible effect created by extracurricular input on the successful acquisition of English prepositions. As a part of the study, it was found that the amount of input received during out-of-school activities could really have an influence on the acquisition of EL, and English prepositions in particular. However, it is necessary to point out that very little positive data relevant to input was identified in the elicited materials. Here it is worth mentioning that certain circumstances serving in some degree as constraining factors for Ukrainian learners of English, could possibly lead to such results. I outline

them below, but without explaining the grounds behind them since would be outside the brief of the present study. So, these aspects include but are not limited to:

(1) Ukrainians, especially Ukrainian families, do not travel abroad a lot; hence, the lack of real-life communication in English.

(2) Such commercial streaming services as Netflix, HBO, iTunes etc. are not very popular among Ukrainians yet; hence, there is less opportunity to watch original TV shows, programs and feature films in [largely [US] English.

(3) EL input is not maintained in families, particularly when parents had some other L2 in school, mostly German or French; hence, no EL practicing with parents.

The theories above are my own speculations regarding the insufficient language input reported in the elicited materials and rest upon the observations made during my visits to Ukraine. Besides, we should not forget that input does not always become intake. According to Schmidt (1990, 139), "intake is that part of the input that the learner notices". As stated in Gass ([1997] 2017, 5), it is "a well-established fact that not everything that learners hear or read is utilized as they form second language grammars". Also, in part of the data, better performance might have resulted not only from more input but from better overall performance at school or diligent studying.

As I learnt from the questionnaires, most of the positive input answers had been given regarding using English in social media and video games, which does not prove to be the source of providing much comprehensible input as a rule. Alongside this, I found out that only one group of participants could confirm receiving enough language experience during their EL lessons, as only a quarter of participants chose the answer *80-100%* to the question *How much of the lesson time does your teacher speak English?* In addition, during EA, 568 errors were defined as the ones resulting from transfer of learning, which constituted 37% from the total error number. All these factors may speak to the insufficient amount of language input and output received during the EL lessons or out of school by the learners who participated in this research, and explain the high level of errors committed in the research materials tasks.

Having regard to the above, it is fair to assume that the current findings add to the modern understanding of the process of acquiring a second language through the example of prepositions in the Ukrainian-English environment. In addition, the results

provided by this study may be useful in compiling teaching materials and school curricula by giving an overall display of certain omissions and deficiencies in regard to the system of teaching English and prepositions in particular.

However, certain caveats need to be added with respect to the present research. First of all, the sample was taken from a very limited number of participants which does derogate from claiming that the findings can be transferred to all Ukrainian learners of L2 English. Other limitations of this study to be mentioned here include the sample profile, method, data collection process and equipment. The investigations were held in the context of prepositions and prepositional phrases, the main method of the study was error analysis and the main research data consisted of a grammar test with a set of five prepositional exercises. It may be that similar explorations of other grammatical categories, applying an alternative research method, or collecting data through any other means or with an extended test, will show somewhat different results.

In view of the foregoing, further research of acquisition of English prepositions by Ukrainian learners involving a higher number of participants and different data and methods could be desirable. It would also be interesting to explore what prepositional errors are committed by senior school pupils in general and to investigate the effect of transfer oat a higher level of language knowledge. It may also be profitable to compare students' performance in Ukrainian and English grammar to define the possible dependence of the latter on the former. Along with that, the errors involving omission or misusage of determiners in other constructions might become the focus of a new study.

Following on from the research data results, it is possible to draw the conclusion that Ukrainian speakers of English who are at intermediate level in EL learning, commit many prepositional errors in writing, a lot of errors are caused by CLI, and the influence of input despite its minor presence is evident and proved by the findings. Based on that, for the English teachers, education coordinators and curriculum developers, it is necessary to go to considerable lengths in order to improve the situation, and perhaps it is worthwhile to pay attention to Corder's (1981, 5) words that "…the occurrence of errors is merely a sign of the present inadequacy of our teaching techniques". Nevertheless, inasmuch as the main purpose of learning FL at secondary level, either at school or in a language course, is, in my opinion, to

understand other FL speakers and to be understood by them, from this perspective the results look more promising.

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Appendix 1. Set of exercises

Task set No.

1. Answer the questions about the pictures. Use **in**, **at** or **on** with the words below the pictures (Дайте короткі відповіді на питання до картинок. Використовуйте **in**, **at** або **on** зі словами під картинками)
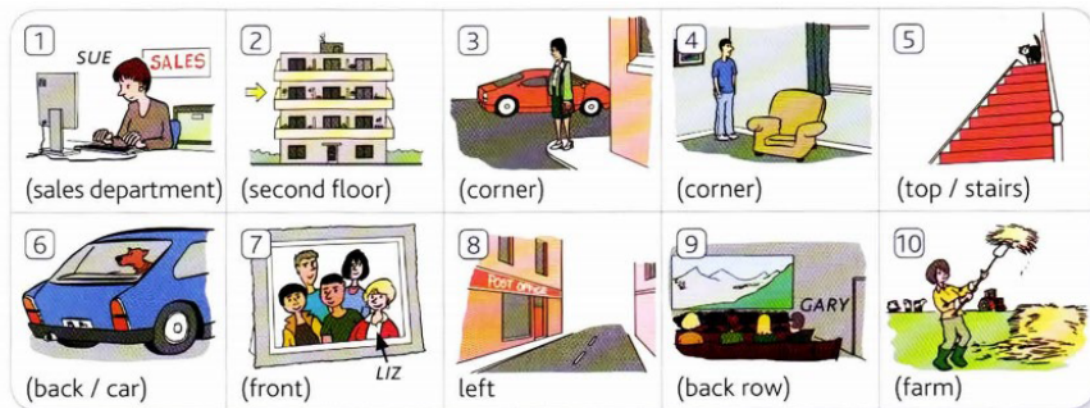
1. Where does Sue work? ………………………………………………………
2. Sue lives in this building. Where's her flat exactly? …………………………….…..
3. Where is the woman standing? …………………………………………………
4. Where is the man standing? ……………………………………………………….
5. Where's the cat? ……………………………………………………………….....
6. Where's the dog? ……………………………………………………………….....
7. Liz is in this group of people. Where is she? …………………………………………….
8. Where's the post office? ……………………………………………………………….
9. Gary is at the cinema. Where is he sitting? …………………………………………….
10. Where does Kate work? ……………………………………………………………..

2. Where are the people in the picture? Complete the sentences (Де знаходяться люди на малюнку? Доповніть речення)

1. Colin is standing ………………….. Frank.
2. Frank is sitting ………………..… Emma.
3. Emma is sitting ………………..… Barbara.
4. Emma is sitting ……………….. Donna and Frank.
5. Donna is sitting ………………….. Emma.
6. Frank is sitting …………………… Colin.
7. Alan is standing …………………….. Donna.
8. Alan is standing ………………….. left.
9. Barbara is standing ……………..…. middle.

3. Look at the pictures and complete the sentences (Подивіться на малюнки і доповніть речення)
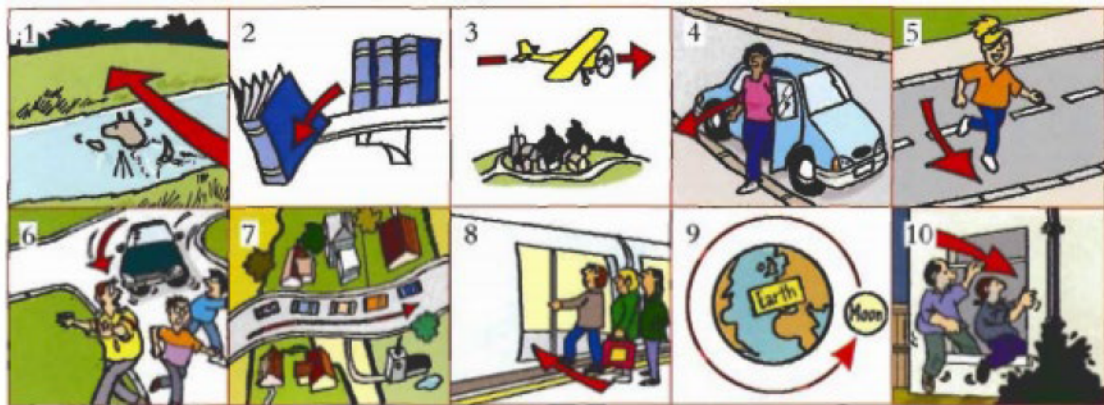
1. The dog swam ………….. the river.
2. A book fell ………….. the shelf.
3. A plane flew ………….. the village.
4. A woman got ……………. the car.
5. A girl ran ……………. the road.

6. Suddenly a car came …………… the corner.
7. They drove …………….. the village.
8. They got …………….. the train.
9. The moon travels ……………. the earth.
10. They got ……… the house ………… the window

4. Which is correct: **a**, **b** or **both** of them? (Який варіант вірний: **a**, **b** чи **обидва**?)

1. **a)** I'll see you on Friday.   **b)** I'll see you Friday.   …………..
2. **a)** I'll see you on next Friday.   **b)** I'll see you next Friday.   …………..
3. **a)** Paul got married in April.   **b)** Paul got married April.   …………..
4. **a)** They never go out on   Sunday evenings.   **b)** They never go out Sunday evenings.   …………..
5. **a)** We often have a short holiday on Christmas.   **b)** We often have a short holiday at Christmas.   …………..
6. **a)** What are you doing on the weekend?   **b)** What are you doing at the weekend?   …………..
7. **a)** We were ill at the same time.   **b)** We were ill in the same time.   …………..
8. **a)** He left school last June.   **b)** He left school in last June.   …………..

5. Complete the sentences using a word from **A** and a word from **B**. You can use a word more than once (Доповніть речення, використовуючи комбінацію слів із групи **A** і групи **B**. Слова можуть повторюватись).

A *away back forward in up*   **B** *at to through with*

1. You are walking too fast. I can't keep ………………………………………… you.
2. My holidays are nearly over. Next week I'll be ………………………………… work.
3. We went ………………………………. top floor of the building to admire the view.
4. The meeting tomorrow is going to be difficult. I'm not looking …………………….. it.
5. There was a bank robbery last week. The robbers got ………………………….£50,000.
6. I love to look ………………………………... the stars in the sky at night.
7. I was sitting in the kitchen when a bird flew ……………………….. the open window.

Appendix 2. Questionnaire

Questionnaire No.

1. Grade
   - ☐ 8
   - ☐ 9

2. What is your native language? _____

3. How many years have you been studying English? _____

4. Does your English teacher speak English at the lessons?
   - ☐ 80-100% of the lesson
   - ☐ 60-79% of the lesson

5. Have you ever been abroad? If yes, did you use English there?

   _____

6. Do you use social media in English?

   _____

7. Do you watch TV shows or movies in English (Netflix, YouTube)?

   _____

8. Do you play computer games with English interface?

   _____

9. Do you have any English-speaking friends or relatives? If yes, do you communicate in English with them?

   _____

10. Do you practice English outside school? If yes, how:
    - ☐ Individually;
    - ☐ With a private tutor;
    - ☐ Attending a language course

Appendix 3. Errors detected in the present study* (a maximis ad minima)

Deviant form	Task No.	Case q-ty	Error type/source/reason
In sales department, on second floor, at corner, on farm, etc.	Ex.1	267	Om./ interl./L1 rule
Got in/inside the train	3.8	28	Sel./considered as interl. in TA/ wrong transl.
Fell from the shelf	3.2	27	Sel./interl./wrong transl.
On Christmas	4.5	26	Sel./interl./wrong transl.
In the back car	1.6	26	Om/interl./L1 rule
On the weekend	4.6	24	Sel./interl./wrong.transl.
In last June	4.8	24	Sel./considered as interl. in TA/ L1 rule
Ran through the road	3.5	19	Sel./intral./false analogy
Got from the car	3.4	15	Sel./considered as interl. in TA/wrong transl.
Sitting in front...	2.3, 2.6	14	Om./interl./L1 rule
Got out the car	3.4	13	Om./interl./L1 rule
Flew above the village	3.3	11	Sel./considered as interl. in TA/ wrong transl.
Swam through the river	3.1	10	Sel./intral./ false analogy
Sitting before…	2.3, 2.6	10	Sel./interl./wrong transl.
Be back to work	5.2	9	Sel./intral., false analogy
They got come the house	3.10	7	Add./unique
On the top stairs	1.5	6	Om./interl./L1 rule
In the front of…	2.3, 2.6	6	Add./intral./false analogy
Standing behind of …	2.1, 2.7	4	Add./intral./false analogy
Standing after…	2.1, 2.7	4	Sel./interl./wrong transl.
Sitting at Emma	2.2, 2.5	3	Sel./interl./ wrong transl.
Got to the train	3.8	2	Sel./interl./wrong transl.
Fell with the shelf	3.2	2	Sel./interl./wrong transl.
Standing behind to …	2.1, 2.7	2	Add./intral./false analogy
Sitting front of	2.3, 2.6	2	Om./ unique
Drove across the village	3.7	2	Sel./interl./wrong transl.
Got with the car	3.4	1	Sel./ interl./wrong transl.
Sales in department	1.1	1	Wrong order, unique
Second on floor	1.2	1	Wrong order, unique

Sel.=selection error
Om.= omission error
Add.= addition error
Interl.= interlingual
Intral. = intralingual
TA=transfer analysis
L1 rule = faulty application of the rule from native language
Wrong transl. = application of wrong translation from native language
False analogy = mistakenly assumed L2 rule
*The other found errors were considered unique or developmental, and thus regarded as difficult to explain.

Appendix 4. Finnish summary

Tämä pro gradu- tutkielma käsittelee prepositioiden omaksumista kieltenvälisen vaikutuksen ja kielisyötteen kannalta englanti toisena kielenä - oppilailla. Tutkimus tehtiin ukrainalaisten opiskelijoiden kirjoitetun kielen analysoinnin kautta. Pro gradu- tutkielman tarkoituksena oli analysoida, kuinka laajaa ukrainalaisten oppilaiden kirjallisen prepositioiden osaaminen on englannissa toisena kielenä. Tutkielmassa käsitellään ukrainalaisten oppilaiden kirjoittaessa tekemiä virheitä englannin prepositioissa, tutkitaan mahdollisia positiivisia ja negatiivisia äidinkielen siirtovaikutuksen seurauksia ja selvitetään luokan ulkopuolisen kielisyötteen panoksen vaikutus prepositioiden omaksumiseen.

Pro gradu- tutkielma koostuu seitsemästä luvusta, joista jokainen edustaa tehdyn tutkimuksen tiettyä vaihetta. Luku 1 on johdantokappale, jossa tuodaan esille tutkielman tavoitteet ja nostetaan esille tärkeimmät tutkimuskysymykset. Tässä esitellään myös perusteet tutkimusaiheen valinnalle ja perustellaan tutkimuksen ajankohtaisuutta.

Luku 2 on jaettu neljään osaan ja se antaa yleiskuvan asiaan liittyvistä teoreettisista kysymyksistä. Osa 1 keskittyy englannin ja ukrainan prepositioiden yhteisiin piirteisiin ja eroihin. Osa 2 määrittelee virheen merkityksen kielitieteessä ja esittelee erilaisia lähestymistapoja virheiden tutkimiseen. Lisäksi se korostaa tutkimuksen merkityksen tärkeyttä kielitieteessä nimittäin toisen kielen omaksumisessa. Osa 3 selittää kieltenvälisen vaikutuksen ilmiötä, luettelee erilaisia mielipiteitä tästä aiheesta ja esittelee kielen siirtovaikutuksen luokituksen nykyisten ominaisuuksien mukaan. Osa 4 keskittyy kielisyötteen hypoteesiin yhdessä tukevien tutkimusten ja ristiriitaisten teorioiden kanssa.

Luku 3 käsittelee aiempia tutkimuksia, joilla on samanlaisia tavoitteita ja jotka keskistyvät prepositiovirheiden analyysiin. Aiheeseen liittyvimmiksi havaittujen töiden joukosta kiinnitettiin huomiota Liisa Vainion (2013) sekä Rosa Alonson, Teresa Cadiernon ja Scott Jarvisin (2016) tutkimuksiin, jotka käsittelevät prepositioiden omaksumisen kieltenvälistä vaikutuksesta englannin kielessä. Lisäksi huomioidaan Natalia Kovalchukin (2010) monipuolisen tutkimuksen tuloksia, jotka kertovat englannin prepositiojärjestelmästä. Mainitut teokset inspiroivat tätä tutkimusta ja tarjosivat perustan sille.

Luku 4 sisältää opinnäytetyön empiirisen osan, jossa kuvataan tutkimustietoja ja menetelmiä. Luku koostuu neljästä osasta. Osa 1 selittää tutkittavien aiheiden valinnan keskittymällä Ukrainan koulujärjestelmään ja muuttujiin, jotka otetaan huomioon osallistujia valittaessa. Osa 2 esittelee tutkimustiedot ja kuvailee tiedonkeruumenetelmää. Osassa 3 tarkastellaan valittuja menetelmiä löytämiseksi vastauksen jokaiseen kolmesta tutkimuskysymyksistä. Osa 4 antaa yleiskuvan suoritetusta pilottitestauksesta.

Luku 5 kuvailee tutkimustuloksia ja kostuu kolmesta osasta. Luvussa analysoidaan ja kuvaillaan empiirisessä tutkimuksessa saatuja tuloksia. Joka luvun osa käsittelee yhden tutkimuskysymyksen. Luvussa 6 viitataan saatujen tulosten keskusteluun ja tehdään suoritetun työn päätelmät.

Opinnäytetyön empiirinen osa suoritettiin kahdessa Keski-Ukrainan peruskoulussa helmikuussa 2020. Tutkielmassa käytetyt tiedot sisälsivät kyselylomakkeen ja harjoitussarjan. Tutkielmaa varten valitut harjoitukset otettiin Raymond Murphyn ([1990] 2007, [1985] 2012) kirjoittamasta harjoituskirjasta englannin kielen ala-asteen ja keskiasteen opiskelijalle. Tutkimukseen valittiin kahdeksankymmentä 13-15-vuotiasta opiskelijaa, jotka opiskelevat kahdeksannella ja yhdeksännellä luokalla. Opiskelijat olivat opiskelleet englantia kahdeksan ja yhdeksän vuotta. Osallistujat erotettiin neljään ryhmään, joissa kussakin oli noin 20 opiskelijaa. Suoritutetuista tehtävistä vain 74 näytettä on käytetty tässä tutkimuksessa. Osallistujien valinta, tutkimusmateriaalien valmistelu ja järjestäminen sekä tiedonkeruumenettely toteutettiin Alison Mackey ja Susan M. Gassin (2005) sekä Rod Ellisin ja Gary Barkhuizenin (2005) teoksissa antamien suositusten mukaisesti.

Vastauksena ensimmäiseen tutkimuskysymykseen käytetään virheanalyysiä. Menetelmän valinnassa käytettiin Pit Corderin julkaisuja ja tutkimuksia aiheesta. Analyysiosa kostuu viidestä vaiheesta, joita on kuvaillut Rod Ellis (2005, 57). Analyysin vaiheet ovat: kielinäytteiden kerääminen, virheiden tunnistaminen, kuvaus, selitys ja arviointi. Virheanalyysin objektina on toiminut opiskelijan suorittama kielioppitesti, joka koostui viidestä prepositioharjoituksesta.

Toinen tutkimuskysymys tutkii todisteita äidinkielen (ukraina) vaikutuksesta toisen kielen (englanti) omaksumiseen. Tähän kysymykseen vastattiin kielten siirtovaikutuksen analyysin avulla. Tässä pro-gradun osassa havaitut siirtotapaukset esitettiin, kuvattiin ja karakterisoitiin. Seuraavaksi tutkittiin osa virheistä, jotka havaittiin virheanalyysissa ja jotka osoittivat kieltenvälisen siirtovaikutuksen

merkkejä. Ohjeet kieltenvälisen siirtovaikutuksen tunnistamiselle ja luokittelulle on otettu Scott Jarvisin ja Aneta Pavlenkon (2008) tutkimuksista, joissa tähän ilmiöön kiinnitetään paljon huomiota.

Kolmas kysymys liittyy kielisyötteen rooliin englannin kielen prepositioiden omaksumisessa. Tarkastelun kohteena oli koulun ulkopuolisen kielisyötteen määrä ja sen mahdollinen vaikutus opiskelijan tuloksiin kielioppitestissä. Kielioppitestin lisäksi opiskelijat vastasivat myös taustatietokyselyyn, Kielipanosta ja siihen liittyviä kysymyksiä tutkittiin Stephen Krashenin perustyön ja Susan Gassin lukuisten havaintojen perusteella (1994, 2000, 2017).

Virheanalyysin aluksi virheet tunnistettiin ja kuvattiin. Virheet laskettiin, ja jaettiin sitten neljään ryhmään virhetyypin mukaan. Käytetyt virhetyypit olivat: väärät valintavirheet, prepositioiden puutteet, lisäykset ja virheellinen sanajärjestys. Kielten siirtovaikutukseen liittyvät virheet muodostivat huomattavan osan virheiden kokonaismäärästä. Sen lisäksi virheellisissä muodoissa havaittiin kielisisäisen vaikutuksen esiintymistä, mutta niiden määrä oli pienempi. Suurin osa virheistä oli kuitenkin sellaisia, että ne eivät vääristäneet merkitystä.

Päätelmänä on, että ukrainalaiset englannin kielen oppijat tekevät paljon virheitä kirjoituksessa. Suurin osa tutkituista virheistä olivat ainutkertaisia. Syynä tähän saattaa olla joidenkin osallistujien äidinkielen heikko osaaminen. Sitä ei kuitenkaan tutkittu tässä tutkimuksessa, eikä siksi käsitelty tarkemmin. Äidinkielen siirtovaikutus oli paljon yleisempää kuin kohdekielen vaikutus virheisiin vaikka osallistujat olivat jo keskitason englannin osaajia.

Kieltenvälinen vaikutusta oli kahdenlaista: osa virheistä johtui virheellisestä äidinkielen käännöksestä, ja osa äidinkielen sääntöjen virheellisestä soveltamisesta. Yhtenä selityksenä tähän saattaa olla se, että äidinkielellä on Ukrainan kouluissa vieraiden kielten opetuksessa iso rooli. Taustakysely osoitti, että osallistujat eivät paljon käytä englantia koulun ulkopuolella. Siksi olisi tärkeää, että koulussa opettaja käyttäisi kohdekieltä mahdollisimman paljon. On hyvä kuitenkin muistaa, että tutkimuksen tuloksia ei voi yleistää, sillä analyysi oli laadullista ja osallistujamäärä rajattu.

Tämän tutkimuksen tarjoamista tuloksista on hyötyä oppimateriaalien ja koulujen opetussuunnitelmien laatimisessa.