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STUDY OF ERRORS IN THE USAGE OF TEMPORAL PREPOSITIONS AMONG CROATIAN SPEAKERS OF ENGLISH LANGUAGE

Submitted in partial fulfilment of the requirements for the M.A. in English Language and Literature and Croatian Language and Literature

Supervisor: doc. dr. sc. Anita Memišević

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Abstract

This thesis presents the findings of a study concerning the usage of temporal prepositions conducted among Croatian speakers of the English language, students of English Language (and Literature) and students of other departments and faculties. Prepositions are a word class which denotes relations between entities. Their primary meaning is spatial, but oftentimes, metaphorical extensions of the meaning are derived from the primary one. Prepositions present a challenge to students and teachers of the English language, mostly because speakers of different languages have different perceptions of the world around them, and because L1 often influences the usage of prepositions.

The test that was administered to the participants of the study consisted of two tasks, a translation task and a gap-filling task. The translation task consisted of 21 sentences, 6 experimental and 15 control sentences in Croatian. The gap-filling task consisted of 30 items, 11 experimental and 19 control items. The test was administered using Google Forms. The total number of participants was 91, 39 students of English Language (and Literature) and 52 students of other departments and faculties. The aims were determining the frequency of errors in the usage of prepositions, determining the type of errors, possible reasons behind them and comparing the two groups of students.

Results showed that participants made 15.58% of errors in the usage of prepositions in both tasks, while students of English language made a statistically significantly smaller number of errors than students of other departments and faculties. Substitution was the most common error type in both tasks in both groups. Errors in both groups of students were made due to L1 influence, overgeneralization of the rules or insufficient knowledge of the rules. Students of English Language (and Literature) made no errors in several items in both tasks, while students

of other faculties and departments made errors in every item of both tasks. However, errors and types of errors were similar among participants in both groups.

Key words: prepositions, temporal prepositions, Contrastive Analysis, Error Analysis, frequency of errors, error types, L1 influence

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1. Introduction

One of the most challenging aspects of learning a different language is getting to know not only its norms, but the way speakers of the language think and perceive the world around them. When it comes to Croatian and English, one of the most difficult parts of both learning and teaching the English language is mastering prepositions. The greatest difficulty in mastering this word class is the different perception of the world surrounding us. It is especially challenging to grasp the meaning of prepositions that do not carry the basic meaning of space, as well as learning how to use such prepositions correctly. This is why researching and studying how speakers of different languages acquire, learn and use prepositions in the English language is a challenging, but necessary task.

According to more traditional, as well as contemporary approaches, prepositions are a word class that denotes relations between two entities. Their primary meaning is spatial, while metaphorical extensions are in general derived from it. Numerous studies have been conducted concerning the way speakers of different languages acquire, learn and use English prepositions, both those that carry the spatial meaning and their metaphorical extensions. Although a great majority of such studies show that speakers of other languages struggle with the usage of English prepositions, primarily due to L1 influence, no extensive research has been done regarding Croatian speakers. This study attempts to give an insight into the way Croatian speakers of English, students of English Language (and Literature) and students of other faculties and departments, use prepositions that are used in their temporal sense.

The thesis is organized in the following way: the second chapter gives a theoretical background of the topic, providing Literature review. Two subchapters are included in this part, Difficulties with prepositions among non-native speakers of English and Contrastive analysis. Chapter 3 deals with Previous research on the topic and provides information about the conducted Pilot study. The present study is described in Chapter 4, including its Aims, Research questions,

Hypotheses, Participants, Instrument, Procedure, Results and Comparison of the results of the two groups of students. The final chapters include Discussion and Conclusion, followed by References and Appendix, where items used in the test are listed.

2. Literature review

The approach to prepositions has changed over time. Starting from a more traditional perspective, according to Thornbury (2002), "prepositions are grammatical words or function words that mainly contribute to the grammatical structure of the sentence" (in Mukundan & Roslim, 2009, p.14). Furthermore, Dirven (1993; p.73) states that "prepositions structure a subjective, language-specific view of relations in our experiential world", while in a traditional grammar book by Quirk (1985) we read that "a preposition expresses a relation between two entities, one being that represented by the prepositional complement." (in Brala, 2011, p.4). In Taylor (1993; p.153), we read that prepositions "denote a relation involving two or more participant entities", the description of the relation being "inherently asymmetrical, in that one participant is selected for foregrounding, while the other participant(s) serves as a background, or reference point entity", the foreground entity referenced as "the trajectory (TR), and the reference point entity as the landmark (LM)." As Brala (2011, p.4) states, in order to better understand the role of prepositions as expressing relations between two entities, we need to understand what it is they put in relation, concluding that "… The simplest type of prepositional spatial expression is composed of three constituents, i.e. the preposition and two noun phrases (NP)…". Here we encounter the notions of "Figure (abbreviated as 'F')" and "Ground (abbreviated as 'G'), where Figure denotes the first NP, or "the object being located" and Ground signifies the second NP, or "the object in reference to which F is being located". Similarly, Lindstromberg (1997) presented a different terminology for the depiction of these notions, using the terms "Subject" and "Landmark" (in Mukundan & Roslim, 2014). He argues that the two notions depict relations in terms of the position of the Subject in relation to the Landmark, depicting them as tangible and using them not only for spatial prepositions, but prepositions of time and path. The importance of these relations, or of the role that prepositions play in language is depicted in Tyler and Evans (2003), when the authors discuss embodied

meaning and spatial perception. The authors claim that there is a certain relationship between the world around us and our perceptions and conceptualizations. More precisely, they argue that spatio-physical properties of the surrounding world are fundamental to our conceptualizations; our body, or our "physical apparatus", basically "gives rise to conceptual structures". Therefore, spatial relations between two objects are always meaningful and we perceive them as having consequences. The authors use the term "trajector-landmark configuration", similarly to Taylor (1993), to describe the relations between the entities in question and to explain the idea of containment, which seems to be one of the first concepts humans acquire. The meaning of a preposition can contain more than one concept; according to Lindstromberg (2010), the meaning of a preposition may include the mental images, as well as functional roles that we associate with a certain preposition. As explained by the author (pp. 17-18), the first notion signifies that "from a standpoint of a viewer… the preposition *BEHIND* will be associated with a schematic image (or images) of Thing B being *on the other side of and at least partly hidden by* Thing A…", while the second notion denotes that the mentioned preposition might be perceived as "concealment".

Given the focus of numerous authors on spatial perceptions and spatio-physical properties of the world around us, one might easily mistake the notions presented as valid only for spatial prepositions. However, this is not the case; understanding basic spatial meanings of prepositions is key to understanding other meanings they carry: "Each preposition has a basic meaning which is spatial. From this basic meaning other meanings are derived, in most cases on the basis of metaphor. This means that in order to learn how to use a preposition it is crucial to understand its basic spatial meaning and to understand how its other senses are derived from this spatial meaning" (Memišević, 2019, p.120). In his study, Boers (1996) states that the aim was "to chart the vertical and horizontal dimensions in English figurative language" (p.9), or "to find out what abstract notions and relations are expressed in terms of the vertical or the horizontal

dimensions…" (p.9). In other words, the study aimed for a better comprehension of the metaphorical extension of the meanings of prepositions (p.11). As in other cases, this study showed that metaphorical extensions of the meaning can be traced back to the prototypical meaning of a preposition According to this, temporal prepositions, or prepositions of time, might be considered a separate category of prepositions, with their meaning being derived from the prototypical one. Lakoff (1993, p.14) discusses the idea further, with domains through which we can see temporal meaning being derived from the spatial one by metaphorical mapping:

"Times are things.

The passing of time is motion.

Future times are in front of the observer; past times are behind the observer.

One thing is moving, the other is stationary; the stationary entity is the deictic center."

Other cases involve observation of passage of time as motion, time being understood as a thing or motion, the present time being the same as the observer, and the metaphor "TIME PASSING IS MOTION", which is "a fixed structure of existing correspondences between the space and time domains" (Lakoff, 1993, p.16). The idea of the prototypical, spatial meaning of prepositions is discussed in Rice (1996), more precisely in a study conducted by presenting 60 stimulus sentences for a certain preposition, where subjects were to rate the similarity of probe sentences and the unchanging target sentence that represented one of the usages of prepositions *at, on* and *in:* spatial, temporal or abstract. The results have shown that, even though the preposition *at* yielded two to three times more temporal usages than the other two prepositions, subjects predominantly opted for spatial domains. This clearly shows that there is an inclination towards prepositions' prototypical, spatial meaning; however, it is necessary to establish the domains of time and space as two separate categories.

2.1. Primary meaning and metaphorical extension of the meaning of prepositions in English, and their Croatian equivalents

As discussed previously, prepositions have their primary, spatial meaning, out of which metaphorical extensions can be derived. One of the metaphorical extensions of the meaning of prepositions is the temporal meaning. Time and space need to be observed as two separate categories, and the meanings of prepositions of time need to therefore be observed as derived from the prototypical, spatial ones. The prepositions observed in this study were sixteen one- or two-syllable prepositions: *at, on, in, behind, between, during, to, from, by, under, after, over, for, before, until* and *since.* The majority of these prepositions were used in the study in both their primary, spatial meanings, as well as their metaphorical and temporal meanings; the prepositions *until, during* and *since* were presented in the instrument only in their temporal meanings. The prepositions which carried the metaphorical meaning were presented as phrasal verbs or denoted a metaphor in the sentence; the distinction between metaphorical, spatial and temporal meanings of the prepositions was therefore clearer. Since the study observed the usage of temporal prepositions among speakers of English language in Croatia, only prepositions carrying such meanings were analyzed, as discussed below in the section The present study.

The preposition *at* in English carries the primary meaning of a point in space, and, when time is discussed, it denotes a point in time (Memišević, 2019, p.121-123). The Croatian equivalent is the preposition *u*, meaning that something is located or is happening inside of something else, or within its limits or radius (Hrvatski jezični portal). The preposition *on* carries the primary meaning of support, while in the temporal sense it denotes a medium-length period of time that is used when talking about days (Memišević, 2019, p.123-125). Its Croatian equivalent is the same as the previously mentioned one, the preposition *u*. Given this, it is expected that learners of English will have difficulties with opting for the most suitable preposition, especially if they do not posses good enough knowledge to distinguish between the discrete distinction between the prepositions in English. When it comes to the preposition *in*, denoting a ‘container’, or a

time period perceived as a container, as well as a shorter period of time, its Croatian equivalent is either *u* or can be rendered by a different word class, or a case in Croatian. The prepositions *behind, between* and *during* all have a literal, direct translation in Croatian; *iza, između* and *tijekom*. The temporal meanings of the first two prepositions, *behind* and *between,* are examples of the direct metaphorical extension from the prototypical meanings: *behind* signifies "in or to the back (of)" (Cambridge Dictionary), something that is in the past, and can be used either in spatial or temporal usage of the prepositions, while *between* signifies a certain separation between two entities or events (Cambridge Dictionary). When it comes to the prepositions *to, by* and *until,* their Croatian equivalent is the preposition *do,* meaning a point in space or time when an event or movement finishes (Hrvatski jezični portal). The spatial meaning of *to* denotes 'orientation' or 'end point of a path', while in its temporal meaning it signifies an end point in time. In the instrument of the present study, a phrasal verb *to boil down to* signifies the main reason for something (Cambridge Dictionary). The preposition *by* denotes either that something is near something else, or, in the temporal sense, a time period up to a certain point (Cambridge Dictionary). In its metaphorical sense, *to swear by something,* it signifies a strong belief in the effectiveness or usefulness of something or someone (Cambridge Dictionary). The preposition *until* signifies 'up to (the time that)' (Cambridge Dictionary) and was used only in its temporal sense in the study. A similar situation with the Croatian equivalents of English prepositions is seen in the following prepositions: *from* and *since.* The preposition *from* in its spatial meaning signifies the source or origin, as well as direction and endpoint (Memišević, 2019, p.137-138). When talking about time, it signifies a starting point, and in the metaphorical sense used in the study, *to shy away from something,* signifies an escape or avoidance (Cambridge Dictionary). *Since,* on the other hand, was introduced to the instrument only in its temporal sense, which denotes that something happened or lasted "from a particular time in the past until a later time, or until now" (Cambridge Dictionary). The Croatian equivalent of both prepositions is *od,*

meaning a starting point in place or time (Hrvatski jezični portal). Since there is no direct, straightforward translation of the English prepositions, and the usage of the preposition *since* often depends on the tense, L1 influence is to be expected in this instance as well. The prepositions *after* and *before* can be literally translated by their Croatian counterparts *nakon* and *prije*, all carrying the temporal meaning of something happening earlier or later than the time in question. Similar meanings can be implemented when space is discussed, while an additional meaning in the form of the phrasal verb *to look after someone* was presented in the study: to take care of someone (Cambridge Dictionary). The last two prepositions analyzed in the study were *under* and *for*, *under* signifying a lower position or a lesser quantity in its spatial and temporal meaning, and the act of believing in something or someone ('often wrongly') in its metaphorical sense (Cambridge Dictionary), and *for* denoting a certain distance, duration, or a person something is intended to be given to (Cambridge Dictionary). When it comes to these two prepositions, their Croatian equivalents would, again, be rendered by a case or a different word class (e.g. *They crossed the ocean in under five hours. / Preplivali su ocean za manje od pet sati.; We walked for five hours. / Hodali smo pet sati.*).

To master the difference between the prototypical, spatial meanings, and their metaphorical extensions, is a challenging task for learners of English language. As described above, the lack of direct, literal translations of English prepositions in Croatian adds to the issue; a greater level of English language proficiency is necessary to successfully recognize the differences between prepositions in English and minimizing the negative transfer. Difficulties of non-native speakers of English with the usage of prepositions are discussed in the following section.

2.2. Difficulties with prepositions among non-native speakers of English language

Understanding the basic meanings of prepositions, as well as their metaphorical extensions, often poses a problem to non-native speakers of English language. Together with articles, prepositions present a great difficulty to learners of any language. The cause for this phenomenon lies in the difference in the perception of the world around us; as discussed earlier, the world around us influences, if not determines, the way we perceive and conceptualize relations in it (Tyler and Evans, 2003; Slobin, 1996). Brala (2011, p.1) states that "Most, if not all (E)FL teachers and students are painfully aware of the fact that when it comes to mastering a foreign language one of the most troublesome areas to learn is the (idiomatic) usage of prepositions". Furthermore, Lorincz and Gordon (2012) state that prepositions "are notoriously difficult for English Language Learners to master due to the sheer number of them in the English language and their polysemous nature" (p.1). As stated in Lam (2009; in Lorincz and Gordon, 2012, p.1), "prepositions can be difficult to recognize, particularly in oral speech, because they typically contain very few syllables." The acquisition and learning of prepositions may be influenced by numerous factors, from the language itself to the proficiency levels of its learners. A view proposed by Mueller (2011) is that "even fairly advanced NNSs use collocational knowledge when acquiring prepositions' noncentral senses" (p.480). Following this, Jimenez (1996) sheds light on "the great difficulty that Spanish students encounter in mastering English prepositions" (p.171). The author names several studies (Moreno and Ruiz 1986, Benitez and Simón, 1990, Morales, 1992) which have shown the difficulties that Spanish learners experience when learning English; however, the author emphasizes that this is not restricted to speakers of any specific language, but is a widespread phenomenon (Politzerand Ramirez, 1973, Khampang, 1974, Lococo, 1976, Meriö, 1978, Azevedo, 1980, Meziani, 1984, González, 1986). Given these facts, it can be concluded that difficulties with the acquisition, learning and usage of English prepositions are present among speakers of numerous languages.

As stated previously, one of the reasons behind these difficulties is the difference in perceptions between two languages and in case of Croatian and English, it can be depicted by the following example:

My friends are in the photo. / Moji su prijatelji na fotografiji.

As shown, speakers of English perceive photographs and pictures as containers, and therefore use the preposition *in* to describe who or what can be seen in them. On the other hand, speakers of Croatian perceive photographs and pictures as surfaces, hence they use the preposition *on* to describe what they contain.

Difficulties in the usage of prepositions might stem from the language in question itself or its relationship with the speaker's mother tongue. Therefore, errors might be influenced by the speaker's L1 or certain similarities between meanings or forms of different prepositions in the target language, in this case English. Lindstromberg (2010) states that a possible intralingual error might be the speaker's choice to say *by random* instead of *at random* because they are similar in meaning. However, the author concludes that interlingual errors are the most common and L1 influence is often inevitable while learning and using prepositions in another language. Another contribution to this view is Slobin's thinking for speaking hypothesis:

"…the expression of experience in linguistic terms constitutes thinking for speaking – a special form of thought that is mobilized for communication. Whatever effects grammar may or may not have outside of the act of speaking, the sort of mental activity that goes on while formulating utterances is not trivial or obvious, and deserves our attention. We encounter the contents of the mind in a special way when they are being accessed for use… I propose that, in acquiring a native language, the child learns particular ways of thinking for speaking." (Slobin, 1996, p.76). Slobin (1996) claims that different languages determine different kinds of attention to experiences when talking about them; he states that grammaticized categories that are the most

susceptible to the influence of the second language “cannot be experienced directly in our perceptual, sensorimotor, and practical dealings with the world.” (p. 91). When discussing the way our brains work when speaking, Slobin (1996) states: “It seems that once our minds have been trained in taking particular points of view for the purposes of speaking, it is exceptionally difficult for us to be retrained.” (p. 91). These claims support the idea that when acquiring and learning a new language, hence new language norms, it might be quite difficult to change the perspective already set in our minds and determined by the world we have been surrounded by.

2.3. Contrastive analysis

In order to discuss the difficulties non-native speakers of English have when using prepositions and errors that emerge as a result, we need to understand the basic notions of contrastive analysis. Richards and Schmidt (2002) state that "contrastive analysis is based on the following three maxims: "a) the main difficulties in learning a new language are caused by interference from L1; b) the difficulties can be predicted by CA; c) teaching materials can make use of CA to reduce the effects of interference"" (in Mahmoodzadeh, 2012, p.735). Contrastive analysis was first introduced by behaviorists, along with their learning theory. Selinker and Gass (2008; in Saeed Al-Sobhi, 2019, p.50) proposed a view in which learning a new language is equal to forming a new set of habits. The view is based on the notions of stimulus and response, and errors are explained as the result of interference between the existing and the new set of habits, in other words language norms. This interference between the norms, or "habits", of two languages, is called transfers. According to Dulay, Burt and Krashen (1982, p.97;as cited in Saeed Al-Sobhi, 2019, p.50), positive transfer is "the automatic use of the L1 structure in L2 performance when the structures in both languages are the same, resulting in correct utterances". Negative transfer, on the other hand, occurs when there are differences in norms between the two languages. As explained by Saeed Al-Sobhi (2019), three versions of Contrastive Analysis can be found in literature: strong, weak and moderate. The strong approach suggests that the differences in the language norms between languages are the prime cause of difficulties language learners experience; according to this version, errors can be predicted and in that way analyzed and remedied. Since this approach has proven to be impractical, a new version has emerged as its opposition: the weak one. The weak approach, or in other words cross-linguistic influence, suggests that errors should be studied only after they had been made and analyzed. Hence, there is no prediction of errors, but rather they are observed as they occur. The last version, or approach, to Contrastive Analysis, is the moderate

one, introduced by Oller and Ziahosseiny (1970; in Saeed Al-Sobhi, 2019, p.51) as a compromise between the two extremes. This view was proposed in their study of spelling errors. The moderate view claims that errors are the result of contrast between the languages, but also of the nature of human learning. In their study, participants who did not use the Roman alphabet in their language had fewer spelling errors than the ones who did, precisely because their alphabet differed so much from the target one; most of the errors in the study were described as intra-, rather than interlingual. This showed that the similarity between two languages can sometimes cause more errors than the difference between them. Given these views and findings, Contrastive Analysis might not always be the best approach to analyzing errors. As stated in Saeed Al-Sobhi (2019), Chomsky (1959; as cited in Ellis, 1994, p.44) was one of the greatest opponents of CA; he claimed that learning a language does not imply learning a set of habits, but mental rules, meaning that not all errors are due to L1 interference: "In other words, foreign/second language learners go through stages of acquisition, and the nature of their errors differ from one development level to another" (p.52).

Following the behaviorist Contrastive Analysis theory, another emerged, this time focusing on the mentalist learning theory; the new approach was called the Error Analysis. Stephan Pit Corder (1975, p.207) introduced the difference between performance analysis, or ""the study of the whole performance data from individual learners" and error analysis, or "the study of the erroneous utterances produced by groups of learners" (as cited in James, 2013, p.3; in Saeed Al-Sobhi, 2019, p.52). Ferris' (2011, p.3; in Saeed Al-Sobhi, 2019, p.52) errors are defined as follows: "morphological, syntactic, and lexical forms that deviate from rules of the target language,…". As stated in Saeed Al-Sobhi (2019, p.52), there are numerous definitions of error analysis, introduced by numerous authors, with one of the most general descriptions given by Selinker and Gass (2008, p.517), claiming that error analysis is "A procedure for analyzing second language data that begins with the errors learners make and then attempts to explain

them". Corder (1974) proposes four stages of analyzing errors: collection of samples, identification of errors, description of errors and explanation of errors (in Saeed Al-Sobhi, 2019). On the other hand, Gass and Selinker (2001) propose a six-step model: collecting data, identification of errors, classification of errors, quantifying errors, analyzing the source of errors and their remediation. Different categorizations are proposed in literature, according to linguistic categories (phonology, morphology, syntax, etc.), surface structures (substitution, omission, redundancy, overgeneralization) or communicative effect (Saeed Al-Sobhi, 2019; Gvarishvili, 2013). A combined approach has been implemented in the present study, with the focus on surface structures. When it comes to intralingual errors, a view by Richards (1974, p.181; in Saeed Al-Sobhi, 2019, p.56) proposes four types of errors caused by the lack of comprehension or language patterns in the language: overgeneralization, meaning that a certain rule is applied even where it is not appropriate, ignorance of rule restriction, where the rules are applied outside of their specific context, incomplete application of rules, where a simple rule is applied, instead of the more complex one, and building of false systems, where the lack of understanding of the target language system and norms occurs. Given everything discussed above, error analysis is oftentimes not simple and straightforward; as stated by Dulay et al. (1982, p.197; in Saeed Al-Sobhi, 2019, p.55), error analysis "… will have to be multidimensional and include factors beyond the observable characteristics of the errors".

3. Previous research

Apart from the abovementioned studies, extensive research has been conducted on the topic of prepositional usage and errors in prepositional usage. One of the most prominent studies concerning spatial language is the one by Bowerman and Pederson (1992; cf. also Bowerman and Choi, 2001, pp.484-487; in Brala, 2007, p.306). This was a crosslinguistic study of prepositional usage. The authors researched the physical, or spatial, senses lexicalized by the English prepositions *on* and *in* and how those senses are lexicalized in 33 different languages. This study offers insight into the difference between the languages and their renditions of the spatial senses. Another relevant study for the present one was by Gvarishvili (2013). This study discussed to what extent Georgian ESL learners rely on their L1 prepositional knowledge in understanding prepositional usage in English. The study explained the notion of learning transfer, positive and negative, focusing on negative transfer. The focus of the study was to identify the types of errors due to negative transfer. Writings of Georgian ESL learners were collected and analyzed, following the model proposed by Gass and Selinker (2001) who identified six steps in conducting an error analysis: collecting data, identifying errors, classifying errors, quantifying errors, analyzing source of error and remediating for errors. Most common types of errors identified were substitution, addition, omission and overgeneralization, while the main reason was L1 interference. The study provides a useful summary of error analysis procedure, discussed above, and the model for classification of errors (substitution, omission and overgeneralization), implemented in the present study. Another more recent study on errors in prepositional usage is by Mahmoodzadeh (2012). It was a crosslinguistic study of prepositions in Persian and English. It discussed the effect of language transfer mentioned in the previous study (negative transfer), but also covered intralingual transfer (errors that are not caused by L1 interference). The author explained why the participants were given a translation task, as well as why translation might be seen as the best basis for comparison of languages. He

listed some advantages: participants would most likely produce the target structure, as well as understand the semantics of the target structure. The participants, adult learners of English language, were given 15 sentences, which they needed to translate from Persian to English. The translated sentences were supposed to include English prepositional constructions. Results have shown that most errors were those of redundancy, omission and wrong use. This study has pedagogical implications in the sense that it suggests to teachers of English language to take these results into account when creating materials and giving feedback. The study offers insight into the translation task as a useful tool for eliciting prepositional structures. Furthermore, the classification of the error type of redundancy was implemented in the present study.

3.1. Pilot study

A pilot study for the purposes of the *Research Methods* course was conducted earlier this year and it focused on prepositional errors among Croatian speakers of English. The study included 22 participants, all university students, ten of which were students of English Language (and Literature) and ten were students of other faculties or departments. Participants were provided with a translation task consisting of 20 sentences in Croatian, English translations of which were expected to be rendered by different prepositions. The test was administered online, using Google Forms. Error analysis was conducted, and errors were classified as substitution, omission and redundancy. L1 interference was discussed as the possible cause of errors. The results have shown that university students of other faculties or departments made 21.83% more errors than students of English Language (and Literature). The total percentage of errors in both groups was 20.91, and the most common error type was substitution due to L1 interference ('*by* foot' among students of English and *'on* the tree' by students of other faculties or departments).

Similar research questions, hypotheses and methodology were presented and implemented in the present study, with the addition of the gap-filling task and a greater number of participants in both groups.

4. The present study

4.1. Aims

The aims of the present study were to determine the frequency of errors in the usage of temporal prepositions among students in Croatia who speak the English language and to determine the most common types of errors among them in a translation task and a gap-filling task. Since the participants were students of English Language (and Literature) and students of other faculties or departments, the aim was also to determine the difference in the usage of temporal prepositions among the two groups of students, or, to be more precise, the aim was to compare the number of errors in the usage of temporal prepositions between students of English Language (and Literature) and students of other faculties or departments.

4.2. Research questions

The abovementioned aims were therefore followed by three research questions this study aimed to answer:

1. To what extent do students in Croatia who speak the English language make errors in the usage of temporal prepositions in the translation and gap-filling task?
2. What are the most common types of errors? and
3. Do university students of English Language (and Literature) make fewer errors in the usage of temporal prepositions than university students of other faculties or departments?

4.3. Hypotheses

The following predictions were drawn from the research questions:

1. Students in Croatia who speak the English language often make errors in the usage of temporal prepositions in the translation and gap-filling task.

This prediction is based on the findings of the studies mentioned earlier in the text, as well as the pilot study that was conducted before the present one; many studies present findings that show acquisition, learning and usage of prepositions as one of the most challenging aspects of learning English language, as well as any other. Furthermore, EFL teachers and students at all levels of learning and language proficiency can confirm the difficulty of mastering this word class. This prediction is followed by the second one:

2. The most common type of errors in the usage of temporal prepositions in English is that of substitution (wrong use), due to L1 interference, or literal translation.

This prediction is based on the research conducted by Gvarishvili (2013), which aimed to identify the types of errors due to negative transfer, or L1 interference among Georgian ESL learners. As shown, the majority of errors in prepositional usage were due to L1 influence, or literal translation of prepositions from one language to the other. The final prediction is the following:

3. University students of English Language (and Literature) make fewer errors than university students of other faculties or departments, hence there is a statistically significant difference between the percentage of errors in the usage of temporal prepositions between the two groups of students.

This prediction is based primarily on the pilot study, which has shown that university students of English language have a notably smaller percentage of errors in prepositional usage. However, the results of the present study are based on statistical analysis in the SPSS statistical software, so the abovementioned hypothesis focuses more on the statistical significance of that difference.

4.4. Participants

The study included 91 university students in Croatia, of which 39 were students of English Language (and Literature) (42.9%) and 52 were students of other faculties or departments (57.1%). Among these, 70 participants were female (76.9%), 19 male (20.9%) and two participants of other sexes (2.2%). Participants were asked to give an estimation of their English language proficiency level; three participants stated they were at the beginner level (3.3%), 30 participants claimed they were at the intermediate level (33%), while 58 participants (63.7%) stated they were at the advanced English language proficiency level. The most common reasons for choosing a certain proficiency level stated by those participants who chose the beginner and intermediate level were the lack of everyday English language usage, the lack of knowledge of specific terminology or knowledge of only the basics. Participants who chose the advanced level most commonly stated they use English every day or very often, are exposed to the language through media and books, have a great understanding of the language, can use it easily or are studying English Language (and Literature) at the university level. When it comes to the participants' age, the mean age was 22.80 and median 23, with the standard deviation of 3.201. The minimum age was 18 and maximum 40, yielding the range of 22.

4.5. Instrument

The instrument consisted of two tasks – a translation task and a gap-filling task. The translation task consisted of 21 sentences in Croatian, 6 experimental sentences and 15 control sentences that acted as fillers. English translations of the sentences were expected to include a temporal preposition, a different one in each of the 6 sentences: *at, on, in, behind, between* and *during*. According to Lindstromberg (2010), the majority of these prepositions are the most common, or the second most common ones in everyday speech. Also, the prepositions are one- or two-syllables long, relatively simple and well-known to speakers of all proficiency levels. Given that participants needed to provide their own translations of the sentences, additional focus was

placed on choosing prepositions which both have and do not have literal translations in Croatian. An example is presented in Example 1 below:

1. *Predavanje počinje u 13 sati.*

The translations of control sentences were expected to include a spatial preposition or a preposition with a metaphorical meaning. Sentences which were expected to be rendered by a spatial preposition included prepositions *at, on, in, behind, between, through/out, up, into* and *alongside/along*, while those which were expected to be rendered by a preposition with a metaphorical meaning included prepositions *at, of, about, for, by* and *from*. All prepositions were chosen at random, keeping in mind their frequency in everyday speech and simplicity. Examples are presented in Example 2 and 2.1. below:

2. *Knjiga je u sobi. / 2.1. Putovali smo autobusom.*

The gap-filling task consisted of 30 sentences, 11 experimental sentences and 19 control sentences that acted as fillers. The experimental sentences included a gap, which needed to be filled with one of the following temporal prepositions: *to, from, by, under, after, over, for, before, until, since* and *during.* These prepositions were also chosen according to their frequency, but other parts of the items, like articles or tenses, were taken into consideration. An example is presented in Example 3 below:

3. *He works from 9 a.m. _____ 5 p.m.*

The 18 control sentences required one of the following spatial prepositions or prepositions with a metaphorical meaning: *to, from, by, under, after, over, for, before, with* and *in.* One sentence required a conjunction *while*. The prepositions and the conjunction were chosen at random, keeping in mind their frequency in everyday speech and simplicity. Examples are presented in Example 4 and 4.1. below:

4. *The river flows _____ the bridge. / 4.1. It boils down _____ this: you need to work harder!*

A full list of experimental and control sentences in both tasks can be found in the Appendix.

4.6. Procedure

The test was administered using Google Forms due to the current situation with Covid-19. The form consisted of a short description of the research, instructions and a personal e-mail address in order for the participants to be able to contact the experimenter. Participants were further instructed to state their age, sex, university, proficiency level and a short explanation of their proficiency level choice. In the second part, 21 sentences in Croatian which needed to be translated into English were presented, along with the corresponding instruction. In the third, final part, participants were presented with 30 sentences in the gap-filling task. The instruction for the second task included the option of writing a zero ('0') in the gap in cases where participants believed the gap should remain empty. This was done to ensure the possibility of omission as an error type. Answers to each item in both tasks were presented as short answers below the item. Each item was labeled as mandatory; in the translation task, this was done to elicit the target language, and in the gap-filling task this was done in order to avoid uncertainty in analysis, or the dilemma of whether participants chose not to answer because they did not know the answer or because they believed a gap should remain empty. Each answer was anonymous and was used exclusively for this study, which was stated at the beginning of the form.

4.7. Results

University students of English Language (and Literature)

In the study, 39 participants were English Language (and Literature) students, both at the undergraduate and graduate level. From the total of 663 items, 234 in the translation task and

429 in the gap-filling task, students of English Language (and Literature) that participated in this study made a total of 72 errors, 23 of those in the translation task and 49 in the gap-filling task. Hence, students of English Language (and Literature) made a total of 10.86% of errors. In the translation task, the participants made a total of 9.83% of errors, while in the gap-filling task, percentage of errors is 11.42. The data is presented in Table 1 below.

	Frequency	Percentage
Translation task	23	9.83
Gap-filling task	49	11.42
Total	72	10.86

Table 1. Frequency of errors among students of English Language (and Literature)

Given the results, students of English Language (and Literature) made 1.59% more errors in the gap-filling task.

Students of English Language (and Literature) made the following types of errors: substitution and omission. Forty-eight errors were substitution errors, meaning the students made this type of error in 66.67% of cases. Omission was the second most common type of error made in 24 instances, or 33.33%. In the translation task, students made 4 substitution errors, or 8.33%, meaning that the remaining 91.67% of errors in the gap-filling task were those of substitution. When it comes to omission, 19 instances were found in the translation task (79.17%) and 5 in the gap-filling task (20.83%). The results are presented in the Table 2 below.

Type of error	Frequency	Percentage	Translation task	Gap-filling task
Substitution	48	66.67	4(8.33%)	44(91.67%)
Omission	24	33.33	19(79.17%)	5(20.83%)

Table 2. Frequency of error types among students of English Language (and Literature)

Following is the analysis of errors and error types in each sentence among students of English Language (and Literature).

The translation task consisted of six sentences which included a temporal preposition. Students were presented with the sentences in Croatian and had to translate them into English, with no further instructions. The first sentence in the translation task was *Predavanje počinje u 13 sati*, expected English translation of which was *The class starts at 1 p.m.* Students of English Language (and Literature) made no errors in the first sentence, meaning every sentence included the temporal preposition *at*. In the second sentence, *Ti su događaji iza nas.*, expected English translation of which was *The events are behind us.* or *Those events are in the past.*, which was also accepted because it carries the same meaning. Students made a total of three errors, while 36 (92.3%) translations were correct. The types of errors were substitution and omission. Frequency of substitution was 2, yielding the percentage of 5.1. In both instances of substitution, the preposition *past w*as used instead of *behind.* According to the Cambridge Dictionary, when used as a preposition, *past* has four meanings: it signifies when something is further or up to or further than something or someone else, it is used to address the time after the one that is being spoken about and it signifies a point in time after a certain time or age limit. Hence, the meaning of the preposition used in the two instances does not correspond to the correct meaning of the preposition, making the usage of the preposition in the two sentences

wrong. The error was possibly made due to overgeneralization of the meaning of the word *past.* The second error type that was made in the second sentence in the translation task was that of omission. Frequency of omission was 1, yielding the percentage of 2.6. The translated sentence which included this type of error was *Those events are over.* Since *over* in this sentence carries the role of an adjective, which "modifies a noun" (Memišević, 2019, p.69), the participant failed to use a preposition in the English rendition of the sentence, hence making an error of omission. As stated, substitution was the most common error type in the sentence, yielding the usage of the inappropriate preposition *past* as the most common error in the sentence (66.67%). In the third sentence, *Spavam između pet i šest sati dnevno.,* the expected English translation of which was *I sleep between five and six hours per day.,* 28 (71.8%) translations were correct, hence 11 errors were made. The errors were those of substitution and omission. Correct renditions of the sentence were the one mentioned above, *I sleep for five to six hours a day, I sleep from five to six hours a day* and *I get from 5 to 6 hours of sleep a day,* with minor variation in translation. These sentences were counted as correct answers because they kept the meaning of the sentence intact while using a prepositional structure (*between, from-to, for-to*). The three errors were the following: the first one, *I sleep for five or six hours a day,* which was counted as an error of substitution because the participant used a prepositional structure (*for-or*) which changed the meaning of the sentence, and the second one, *I get to six hours of sleep every day,* which was counted as an error of omission. According to the Cambridge Dictionary, preposition *to* carries the meaning of "until a particular time, state, or level is reached" and in this meaning it is inappropriately used in this context (in order for the preposition *to* to carry this meaning in this sentence, the preposition *up(to)* is necessary, which was omitted). Both errors are results of translation variation which in this case changed the meaning of the sentence. The third error was that of omission and was found in the sentence *I sleep five to six hours a day,* because the target preposition, or the prepositional structure with the meaning *between,* was omitted. Only

one error was that of substitution and 10 were those of omission, making it the most common error in the sentence (90.91%). The fourth sentence, *Škola počinje u ponedjeljak.,* expected English translation of which was *School starts on Monday,* yielded 37 (94.9%) correct translations rendered by the preposition *on.* The first error, that of substitution, was the usage of preposition *in*. The error was the result of L1 interference, or literal translation from Croatian; the preposition *u* is the Croatian equivalent of the preposition *in*. Furthermore, the preposition *on* when used to talk about time denotes "…medium-length periods of time, usually days…" (Memišević, 2019, p. 131), while *in* when used to talk about time denotes "…periods of time which are perceived as containers which contain certain events" and "these periods tend to be longer." (Memišević, 2019, p. 131). The second error, that of omission, was the rendition without the usage of a prepositional structure: *School starts Monday;* the error might be the result of incomplete application of rules, where a simpler structure is used in the place of a more complex one. In the fifth sentence, *Zimi je jako hladno,* 38 participants (97.4%) provided a translation which was counted as a correct answer. The expected English translation was *It is very cold in the winter*, where the preposition *in* is perceived, as stated above, a container and tends to signify a longer period of time. Also, the usage of the preposition *during* was counted as the correct answer. Only one participant made an error and the error was that of omission: *Winters get really cold.* The participant failed to use a prepositional structure as expected, even though the sentence itself carriers the meaning of the original one and is grammatically correct. The sixth and final sentence in the translation task, *Zaprosio ju je tijekom odmora u Italiji,* provided the biggest number of errors among students of English Language (and Literature) in the translation task. The expected English translation was *He proposed to her during their vacation in Italy.* Thirty-three participants (84.6%) provided a correct translation and the usage of a prepositional structure, the one mentioned above as well as the sentence *He proposed to her on their vacation in Italy.* Out of six errors, all were errors of omission. The six errors of

omission consisted of the conjunction *while* instead of a prepositional structure: *He proposed to her while on vacation (holidays) in Italy. / He proposed to her while vacationing in Italy. / He proposed to her while they were on a vacation in Italy.* According to the Cambridge Dictionary, *while* is a conjunction meaning "during the time that, or at the same time as", while Merriam-Webster states that *while* is used as a preposition only in "dialectal British", meaning *until.* Also, Memišević (2019) does not include *while* in the list of English prepositions and states that the difference between prepositions and conjunctions is in the nominal or nominalized element that follows the word (preposition) or lack thereof (conjunction). The meaning of the conjunction might explain the number of errors because it corresponds to the meaning of its prepositional equivalent. Given the results, the most common type of error in the translation task was that of omission, with 10 instances in the third sentence of the translation task.

The gap-filling task consisted of 11 sentences in English. Participants were instructed to fill in the gaps with the appropriate word or words or write '0' if they thought the gap should stay empty. Participants made no errors in sentences number 1, 2, 4, 8 and 11. In the first sentence, *He works from 9 a.m. _____ 5 p.m.,* prepositions *to* and *until ('till)* were counted as correct answers, since the meanings of both prepositions are similar. In the second sentence, *I always talk to my best friend _____ going to bed.,* all the participants used the preposition *before.* In the fourth sentence, *I only saw him once _____ my stay in London.,* every participant wrote the preposition *during* in the gap. In the final sentence, *You must check-out of the hotel room _____ 10 a.m.,* prepositions *by, before, until ('till)* and *at* were counted as correct options due to lack of context. In the third sentence, *I feel tired _____ three hours of studying.,* 38 participants (97.4%) made no errors by using prepositions *after* and *from*, *after* being "the opposite of 'before', meaning that it is used in situations which are perceived as sequences" (Memišević, 2019, p. 147) and *from* denoting "the cause of something or the reason why something happens"

(Cambridge Dictionary). Only one error was made in the sentence, and that was an error of substitution. The participant used the preposition *for,* which is inappropriate due to the fact that it carries the meaning of "duration of time" (Merriem-Webster) which is not suitable in this context. In the fifth sentence, *I will wait _____ midnight for you.,* 38 participants (97.4%) chose the correct preposition *until ('till)* or *at*, while one participant made the error of substitution. The error was the usage of preposition *for*. *At* as a temporal preposition denotes "a point in time" (Memišević, 2019, p.131), while the meaning of *for* when talking about time "derives from the 'Distance' spatial sense and it is used to indicate the duration of an action" (Memišević, 2019, p.164). Considering the meaning of *until* is "up to (the time that)" (Cambrige Dictionary), the second alternative is not appropriate in the context. In the sixth sentence, *My grandfather has lived here _____ the 1950s.,* only the preposition *since* was accepted as the correct answer because of the usage of the Present Perfect Tense. 28 participants (71.8%) made no errors, while 11 (28.2%) made the error of substitution. Participants used the preposition *in* in 9 instances (81.8%) and the preposition *during* in 2 instances (18.2%). Since both prepositions can be used with the Past Simple Tense, denoting that the action described happened in the past and finished in the past, they are not suitable for a sentence describing an action that is still happening in the present; these errors might be the result of insufficient knowledge of the rule. This is why the preposition *since* is the only possible correct answer, carrying the meaning of " from a particular time in the past until a later time, or until now" (Cambridge Dictionary). In the seventh sentence, *She will be absent _____ Monday until Thursday.,* 37 participants (94.9%) wrote the correct preposition. According to the Cambridge Dictionary, the preposition *from* in a temporal sense shows "when something starts or the time when it was made or first existed"; also, "we use from with until or till to talk about when something begins and when it ends" (Cambridge Dictionary). In everyday speech, we may encounter different, correct variations of the sentence: *She will be absent from Monday until Thursday. / She will be absent Monday*

through Thursday. / She will be absent Monday to Thursday, which are all acceptable alternatives. One participant made the error of substitution by writing the preposition *on,* which does not denote *Monday* as a starting point, but the starting and the ending point. The second error was that of omission, where the participant wrote *'0'*; according to the Cambridge Dictionary and the definition of the (mandatory) relationship between *from* and *until,* this is counted as an error. The eighth sentence, *They crossed the ocean in _____ five hours.,* yielded 39 correct answers. The answers which were counted as correct were *under, about, around, less than* and *'0'.* The construction of this item in Croatian allowed for numerous possibilities, like the prepositions *in* and *under* in the temporal sense, as well as the usage of prepositions a*bout, around* and *(less)than* which in this case have the roles of adverbs. One participant wrote the preposition *in* in the gap, but this was not counted as an error, rather a correct answer, because given other answers by the participant and their proficiency level, it is very likely that the error was actually a typo; it is also possible that the participant overlooked the already written preposition *in* in the sentence. In the ninth sentence, *We walked _____ 5 hours.,* 38 participants (97.4%) made no errors by writing the preposition *for* in the gap, while one participant made the error of omission by writing *'0'* in the gap. In the temporal sense, the preposition *for i*s "derived from the 'Distance' spatial sense and is used to indicate the duration of an action" (Memišević, 2019, p. 164) and omitting it is not the natural choice for the English language. This construction, *We walked 5 hours.,* derives its form from Croatian – *Hodali smo 5 sati.,* which might indicate the influence of L1 or negative transfer. In the tenth sentence, *We will be away _____ the week.,* only six participants (15.4%) made the correct choice of prepositions, *during* or *over.* The expected answer was the preposition *over* due to its usage when referring "to the entire time span defined in a particular instance", although the preposition *during* was also counted as the correct answer with its more particular temporal meaning. The other 33 participants made errors of substitution and omission; 30 participants (76.9%) made the error

of substitution by writing the preposition *for* and three participants (7.7%) made the error of omission by writing *'0'* or – (which was also interpreted as the error of omission, even though the participant did not write *'0'* in the gap; given other participant's answers, it was unlikely that they wrote *'-'* because they did not know how to answer) in the gap. By omitting the preposition, the sentence loses its meaning, and by substituting prepositions *over* or *during* with the preposition *for,* its meaning is changed. The choice of article plays the most important role in the sentence - the preposition *for* would in this sentence be correct if the sentence included the indefinite article *a;* the sentence would then signify that someone has been away for a week, denoting a certain duration of the described action. However, if the sentence includes the definite article *the,* by introducing the mentioned preposition, it loses its meaning completely. While *over* and *during* also denote periods of time, they are more appropriate when used alongside the definite article. This sentence yielded the greatest number of errors in the gap-filling task among students of English Language (and Literature) with 84.6% participants who made the error. This makes substitution the most common error in the task and the usage of the preposition *for* in the tenth sentence the most common error in the gap-filling task.

University students of other departments and faculties

In the study, 52 participants were students of other departments and faculties. Out of 884 items tested, 312 in the translation task and 572 in the gap-filling task, this group of students made a total of 169 errors (19.12%), out of which 44 (26.04%) were in the translation task and 125 (73.96%) in the gap-filling task. The results are presented in the Table 3 below.

	Frequency	Percentage
Translation task	44	26.04
Gap-filling task	125	73.96
Total	169	19.12

Table 3. Frequency of errors among students of other departments and faculties

Given the results, this group of students has made 47.92% more errors in the gap-filling task.

Types of errors found among the answers in this group of students were substitution, omission, redundancy and one type of error which was qualified as an invalid answer. Students made a total of 111 substitution errors (65.68%), 26 (23.42%) in the translation task and 85 (76.58%) in the gap-filling task. Frequency of omission errors was 43 (25.44%), 14 errors (32.56%) of which were in the translation task and 29 (67.44%) in the gap-filling task. Only two participants made the error of redundancy, making the error type present in 1.18% of cases. Thirteen errors were those of invalid answer, two of them in the translation task and eleven in the gap-filling task. These answers were counted as errors and placed in the category of invalid answers. The percentage of such errors among the other ones was 7.69%. The results are presented in the Table 4 below.

Type of error	Frequency	Percentage	Translation task	Gap-filling task
Substitution	111	65.68	26(23.42%)	85(76.58%)
Omission	43	25.45	14(32.56%)	29(67.44%)
Redundancy	2	1.18	2(100%)	/
Invalid answer	13	7.69	2(15.38%)	11(84.62%)

Table 4. Frequency of error types among students of other departments and faculties

Following is the analysis of errors and error types in each sentence among students of other departments and faculties.

In the translation task, students in this group were presented with the same group of sentences, six sentences in Croatian which they needed to translate into English. Like the first group, they were given no further instructions. In the first sentence, *Predavanje počinje u 13 sati,* expected English translation of which was *The class starts at 1 p.m.,,* the correct choice of preposition was *at,* denoting "a point in time" (Memišević, 2019, p. 123). Out of 52 participants, 49 made no errors (94.2%) and 3 (5.8%) made the error of substitution. Hence, substitution was the only error type in the first sentence and in all cases the error was the usage of the preposition *in.* As mentioned in the analysis of the results of the first group of students, this preposition, when it comes to time, is seen as a container and it signifies a longer period of time. This error is the result of literal translation of the preposition *u* in Croatian, so the error was most likely made due to L1 influence (*Škola počinje u 13 sati.*). In the second sentence, *Ti su događaji iza nas,* expected English translation of which was *The events are behind us,* participants made three errors, meaning that 49 (94.2%) participants chose the expected and correct preposition *behind* or translated the sentence using the preposition *in: Those events are in the past.* This

formulation was accepted as correct because it did not change the meaning of the sentence and it contains the preposition *in* which serves as a "time container" in this context. One participant made the error of substitution by including the preposition *beyond* in the translation; *beyond* carries the meanings "on or to the farther side of: at a greater distance than", "out of the reach or sphere", "in a degree or amount surpassing" or "out of the comprehension of" (Merriam-Webster), which is different than the expected meaning, therefore it is not appropriate. One participant made the error of redundancy (1.9%) by translating the sentence in the following way: *Those events are past behind us.* As mentioned in the analysis of the results of the first group of students, the preposition *past* is used to denote a point further than the current one, so it is not the appropriate choice for this sentence, as well as being redundant. One participant provided no translation, so the answer was counted as an error, or an invalid answer. The preposition in the third sentence, *Spavam između pet i šest sati dnevno.,* was expected to be rendered in English by the preposition *between.* The correct translations were *I sleep between five and six hours per night, I sleep for five to six hours daily* and *I sleep from 5 to 6 hours a day.* Forty participants (76.9%) translated the sentence in one of the abovementioned ways. The error of substitution was made in 5 (9.6%) instances, by producing the following translations: *I sleep between 5 to 6 hours a day* and *I sleep between 5 or 6 hours a day.* The incorrect prepositional combinations made the sentences incorrect; the preposition *between* "can be used to name a range by naming its extremes or to give an estimate by naming the values or locations on either side of it" (Memišević, 2019, p. 143) and should be followed by a*nd* between the two extremes; the translations which included combinations *between-to* and *between-or* were counted as errors. Six participants made the error of omission (11.5%) by providing the sentences *I sleep five and six hours per a night* and *I sleep five to six hours a day.* In the first sentence, by omitting the preposition, the meaning of the sentence was changed, and in the second sentence, the participant omitted the preposition, or the prepositional structure, with the

meaning *between.* One error was that of redundancy; the participant used the structure *in between*, "which is slightly more specific (and therefore potentially more emphatic)" (Lindstromberg, 2010, p. 90). One participant wrote the preposition *between* twice in their translation, however, this was not counted as an error; given the participant's other answers and proficiency level, the error was most likely a typo. In the fourth sentence, *Škola počinje u ponedjeljak,* 36 (69.2%) participants chose the correct preposition *on*. Twelve students (23.1%) made the error of substitution, using prepositions *in* and *at*. *On* is used "typically with days" (Memišević, 2019, p. 125) and the errors might be the result of negative transfer and literal translation (*Škola počinje u pondjeljak*) or overgeneralization of the meaning of *at* (a point in time). Three errors were those of omission (5.8%); students translated the sentence as *School starts Monday,* signifying a possible incomplete application of rules. One error (1.9%) was an invalid answer, where the participant merely copied the sentence in Croatian. In the fifth sentence, *Zimi je jako hladno,* 45 (86.5%) participants chose the correct prepositions *in* or d*uring.* Three participants (5.8%) made the error of omission, present in the following translations: *Winters are really cold., Winter is really cold* and *It is very cold when it's winter time.* Neither of the three English renditions contain a prepositional structure. The second error type was substitution, with the frequency of 4 (7.7%). All four errors were caused by using the preposition *at.* Again, this might be due to the overgeneralization of the meaning of this preposition as a point in time. In the final sentence in the translation task, *Zaprosio ju je tijekom odmora u Italiji,* 49 participans (94.2%) made the correct choice of preposition – *during* or *on.* One participant made the error of substitution (1.9%) by using the preposition *at*, and two participants made the error of omission (3.8%). The two errors were the following: *He proposed to her in Italy while on vacation.* and *He engaged her when they were on vacation in Italy.* Neither one of the sentences contains prepositional structures, but rather conjunctions to convey the meaning. Given the results, substitution was the most common error type in the translation

task among students of other departments and faculties. Most errors of substitution were made in the fourth sentence and nine out of twelve errors were the usage of the preposition *at* (*School starts at Monday*), making it the most common error in the translation task among this group of students.

In the gap-filling task, participants were presented with 11 sentences and were instructed to fill in the gap with the appropriate word or words or write a '0' if they thought the gap should stay empty. One participant wrote *'0'* as the answer in every sentence of the gap-filling task; all 11 of their answers were counted as invalid. Given that the participant translated almost every sentence in the translation task, but failed to provide an answer for at least one sentence in the gap-filling task, the 'zeros' were not counted as errors of omission, but invalid answers. The participant evaluated their proficiency level as the beginning level and the avoidance of providing answers in the second task was most likely due to lack of knowledge or motivation for completing the task. This is why, in the eighth sentence of the gap-filling task, the answer *'0'* that the participant provided was not counted as correct like the rest of the same answers (*'0'*). This was, however, an isolated example; the answer *'0'* was counted as an error of omission in every other case, due to the lack of knowledge whether participants wanted to omit the preposition or simply did not know what to write in the gap. Also, there was no obvious pattern in other participants' answers like in the abovementioned one. In the first item, *He works from 9 a.m. _____ 5 p.m.*, 50 participants (96.2%) wrote the correct preposition *to* or *until ('till).* Since the structure *from-to,* as previously explained, signifies a certain range, and *until* means "up to (the time that)" (Cambridge Dictionary), the two choices were counted as correct. One participant (1.9%) made the substitution error by writing the preposition *between*, and one participant (1.9%) made the error of invalid answer by writing *'0'*. In the second item, *I always talk to my best friend _____ going to bed,* 47 participants (90.4%) made no errors and wrote the appropriate preposition *before* in the gap: "Since every sequence is a temporal concept, this

preposition has a temporal sense – i.e. it can indicate that one event takes place at an earlier point within a timeline of events…" (Memišević, 2019, p. 146). Four participants (7.7%) made the error of omission, by writing conjunctions *while* or *when* in the gap and one answer (*'0'*) was counted as invalid. In the third item, *I feel tired _____ three hours of studying.*, 46 participants (88.5%) wrote one of the appropriate prepositions in the gap, *after* or *from.* The reasoning behind accepting the two options as correct is stated in the analysis of the results of the first group. An error of omission was made in one instance by writing *because of* and one answer was invalid. In four instances (7.7%) errors of substitution were made, and by using the prepositions *for* and *of.* According to Memišević (2019), *for* can signify purpose, as well as time, or duration of time, which is a possible sign of misunderstanding of the meaning of this preposition in English (someone studies for three hours and is therefore tired). When it comes to the preposition *of*, it can signify a source material (Memišević, 2019, p. 165), so the cause of the error might be overgeneralization of the meaning of the preposition. In the fourth sentence, *I only saw him once _____ my stay in London.*, 41 (78.8%) participants wrote the correct answer *during.* Four participants made the error of omission (7.7%) by writing *'0', while* and *when* and one answer was invalid. Six participants (11.5%) made the error of substitution by writing prepositions *on, before, at* and *throughout.* As explained previously, *on* signifies a mid-length duration and it is not a natural sounding choice in this context. *Before* is not the appropriate choice for this sentence because the verb preceding it is in Past Simple, and not Present Perfect Simple. *At,* again, might be the result of overgeneralization of its meaning by the participant. According to Lindstromberg (2010), *throughout* is like experiencing an event "… by car as you drive through it off the expressway on city streets." (p. 130), meaning it signifies "the whole period of time" (Cambridge Dictionary), which is contrary to the meaning of the sentence. In the fifth sentence, *I will wait _____ midnight for you.*, 47 participants (90.4%) made no errors by writing *until('till)* in the gap. Two participants (3.8%) made the error of omission by writing

'0' or the article *the,* and one answer was counted as an invalid answer. Two participants (3.8%) made the error of substitution by choosing prepositions *for* and *to; for* signifies duration, and *to* is not a natural choice in this context. In the sixth item, *My grandfather has lived here _____ the 1950s.,* 25 participants (48.1%) made the correct choice by writing *since* in the gap. The reasoning behind counting *since* as the correct answer is the same as in the analysis of the results of the first group. One error of omission was made, were the participant wrote *'0'* in the gap and one invalid answer was given. Twenty-five (48.1%) participants made the error of substitution by writing prepositions *for, in, until, during, from, before* and *through.* The preposition *through* signifies duration "from the beginning to the end of a period of time", hence it is not an appropriate choice for a sentence which includes Present Perfect Tense. Similarly, the other prepositions mentioned either are not appropriate with the Present Perfect Tense, or change the meaning of the sentence. *Before* is not appropriate because the verb preceding it in this context would have to be in the Past Perfect Tense, because it signifies that someone had lived somewhere before a certain period of time (the 1950s). The preposition *from* has the same meaning as *since;* however, it is a less appropriate choice. In the seventh item, *She will be absent _____ Monday until Thursday.,* 45 (86.5%) participants provided the correct option, preposition *from.* As explained above, this preposition signifies when something starts and is usually used with *until* or *to.* Three participants (5.8%) made the error of omission, where two participants wrote *'0'* and one participant wrote *starting,* while one answer was counted as invalid. Three participants (5.8%) made the error of substitution by choosing prepositions *on* and *by.* The meaning of the latter is similar to *until,* so in this context it does not make sense. In the eighth item, *They crossed the ocean in _____ five hours.,* 50 participants (96.2%) made no errors because, similarly to the first group of students, answers *under,'0', about, just, approximately* and *less than* were all accepted due to the lack of context and the existing preposition *in* in the source sentence. One error of omission was made, where the participant

wrote the article *the* in the gap; even though other word classes were accepted in this sentence due to the lack of context, the article *the* was not, because using it makes the sentence incorrect. Furthermore, one answer (*'0'*) was counted as invalid; in this case, *'0'* was not accepted as the correct answer because of the abovementioned reason. In the ninth item, *We walked _____ 5 hours.*, 40 participants (76.9%) chose the appropriate preposition *for*, meaning duration, while 11 participants (21.2%) made the error of omission by writing *'0', like* or *about* in the gap. One answer was counted as invalid. In the tenth item, *We will be away _____ the week.*, 6 participants (11.5%) made no errors by choosing the preposition *during, at beginning of, throughout* or *by the end of.* Although phrases, the last two alternatives include prepositions which are appropriate in the context, *at* being a point in time (the beginning of the week) and *by* signifying a period until the end of the week. Two errors of omission (3.9%) were made, by writing *'0'* or *this* in the gap, while one answer was counted as invalid. The greatest number of errors (43, or 82.7%) was made by substituting the correct prepositions with the following inappropriate alternatives: *for, at, through* and *after.* As explained in the analysis of the results of the first group of students, the preposition *for* would be appropriate if the sentence included the article *a;* this way, the sentence loses its meaning. *At* denotes a point in time, so the duration it implies is too short for this context. *Through* denotes that something is happening "from the beginning to the end of a period of time" (Cambridge Dictionary), and in this context is not the most suitable choice, unlike *throughout*, which denotes "in every part, or during the whole period of time" (Cambridge Dictionary), which is a more appropriate choice because it signifies that someone will be away in every part of the week. The preposition *after* in this context does not sound natural in English; a construction *We will go away after this week* would be more suitable in this context – the verb *to be* here is more appropriate for the present moment or near future. In the final sentence, *You must check-out of the hotel room _____ 10 a.m.*, 50 participants (96.2%) made no errors by writing *until, at, before* and *by* in the gaps. The prepositions were

accepted due to the same reasons as mentioned in the analysis of the results of the first group of students. One error of invalid answer was made, where the participant decided upon writing *'0'* in the gap. The same frequency was determined for the error of substitution; one participant opted for the preposition *in*, which is not suitable in this context because it represents time through the notion of containment, rather than a specific, short-length point in time.

4.8. Comparison of the results of the two groups of students

In order to compare the percentages of errors in both groups of students, a chi-square test was performed, using the SPSS statistical software. Following are two tables, the "university-error" crosstabulation and the table providing chi-square results:

University * Errors Crosstabulation

			Errors		
			Correct	Error	Total
University	Students of English language	Count	591	72	663
		Expected Count	559,7	103,3	663,0
		Residual	31,3	-31,3	
	Students of other faculties or departments	Count	715	169	884
		Expected Count	746,3	137,7	884,0
		Residual	-31,3	31,3	
Total		Count	1306	241	1547
		Expected Count	1306,0	241,0	1547,0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	19,644[a]	1	,000		
Continuity Correction[b]	19,021	1	,000		
Likelihood Ratio	20,282	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	19,632	1	,000		
N of Valid Cases	1547				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 103,29.

b. Computed only for a 2x2 table

As stated in the footnote of the second table, 0 cells have expected count less than 5, and the minimum expected count is 103.29. This criterion was met because every cell in the results of both groups has the “Expected Count” greater than 5. In the second table, “Pearson Chi-Square” signifies the value of the test statistic, which is 19.664 and the predetermined significance level, or *alpha* value, equals 0.05. This signifies that the p value is <0.001 ($p<0.001$), meaning that there is a statistically significant difference between the percentage of errors between students of English language (Literature) and students of other faculties and departments at the level of significance of 1%. Hence, we can conclude that there is a significant association between students’ major and number of errors.

5. Discussion

This study aimed to answer three questions: to what extent do students in Croatia who speak the English language make errors in the usage of temporal prepositions in the translation and gap-filling task, what the most common types of errors are and whether university students of English Language (and Literature) make fewer errors in the usage of temporal prepositions than university students of other faculties or departments. The predictions based on the questions were as following: students in Croatia who speak the English language often make errors while using prepositions of time in the translation and gap-filling task, the most common type of error is substitution due to L1 influence, and students of English Language (and Literature) make a statistically significantly smaller number of errors in the usage of temporal prepositions in the two tasks.

The first prediction was only partially confirmed; participants made 241 errors out of 1547 items in the test, meaning that 1306 answers were correct. This signifies that the participants in both groups made a total of 15.58% of errors in the translation task and the gap-filling task. This percentage shows that the participants tend to make errors in the usage of temporal prepositions often. However, the great majority (84.42%) of their answers were correct. Out of 241 errors in total, 159 were those of substitution (65.98%), 67 (27.80%) errors were those of omission, 2 (0.83%) were those of redundancy, and 13 (5.39%) were those of invalid answer. This means that substitution was the most common type of error, due to L1 interference or literal translation, overgeneralization of the rules or insufficient knowledge of the rules. The second prediction was therefore confirmed partially, due to other possible reasons behind the errors, other than just L1 interference. In the translation task, 67 errors in total (27.80%) were made, 30 (44.78%) were those of substitution, 33 (49.26) were errors of omission, 2 (2.98%) of redundancy, and 2 (2.98%) errors were invalid answers. The biggest number of errors was made in the gap-filling task, 174 errors in total (72.20%), 129 (74.14%) were those of

substitution, 34 (19.54%) those of omission, and 11 (6.32%) errors were counted as invalid answers. Given the results of the chi-square test, the third, and final, prediction was confirmed: there is a significant association between the students' majors and number of errors, meaning there is a statistically significant difference in the percentage of errors between students of English Language (and Literature) and students of other departments or faculties.

In both groups of students, substitution was the most common type of error. Students of English Language (and Literature) made a total of 66.67% of errors of substitution, while students of other departments and faculties made 65.68% of errors of substitution. The numbers are, therefore, similar, even though the overall number of errors between the two groups differs significantly. This might be due to the fact that the participants of both groups made similar types of errors, and similar errors as well, so this might explain the minor difference in the percentages of errors of substitution. Also, participants of both groups made errors of substitution in the greatest number of cases due to L1 influence, literal translation or overgeneralization of the rules, so the numbers are similar. Participants in both groups made a greater number of errors in the gap-filling task, with students of English Language (and Literature) making 1.59% more errors in the gap-filling task and students of other departments and faculties making 47.92% more errors in the gap-filling task. This difference in the numbers is significant; given the percentages, students of other departments and faculties found the gap-filling task much more challenging than the translation task, while students of English Language (and Literature) made a similar number of errors in both tasks. This could be attributed to a greater level of freedom in the translation task (when presented with items that require a specific word (preposition), students of other departments and faculties tend to make a much greater number of errors than in items that allow for variations and alternatives of the correct answer), as well as to the lack of context, due to isolated sentences. In the translation task, participants provided different variations of translations of Croatian sentences, and many answers were

accepted even if they contained a prepositional structure different than the expected one. In the gap-filling task, the possibility of variations in answers was much smaller, and specific word, or words, were expected.

As mentioned previously, the prediction that the greatest number of errors will be caused by L1 influence was only partially confirmed; students in both groups made equally as many errors due to overgeneralization or insufficient knowledge of the rules. Students of other departments and faculties showed a greater number of literal translations of the prepositions; however, types of errors and their possible causes were similar in both groups. This was mostly shown in the tenth item of the gap-filling task, *We will be away* _____ *the week*, which yielded the greatest number of errors in both groups. The majority of students of English Language (and Literature), 30 of them, wrote the preposition *for* in the gap. The error of substitution in this item was the most common error in the gap-filling task (84.6%) and it was the result of insufficient knowledge of the rules regarding articles, as explained in the Results section. The other group of students chose prepositions *for, at, through* and *after* in 43 instances, or 82.7%. Such a result of this group of participants can also be attributed to the insufficient knowledge of articles in the English language. As explained in the Results section, the definite article *the* in this context does not allow for the abovementioned prepositions participants opted for. Therefore, the number and type of errors in this item in both groups of participants were mostly due to insufficient knowledge of the rules concerning articles in the English language and cannot be attributed to L1 influence, or literal translation. Another similarity in answers of the two groups was found in the third sentence of the translation task: *Spavam između pet i šest sati dnevno.* Among students of English Language (and Literature), the most common error in the item (and the translation task in general) was that of omission. The majority of participants translated the sentence as *I sleep five to six hours a day.*, hence omitting the target preposition *between.* The same rendition of the sentence was found among participants of the other group. Omission in

these instances might be the result of translation variation; the meaning of the sentence is similar to the target one, therefore, it is possible that the participants found this alternative acceptable. Furthermore, the reasoning behind translating the sentence in this way might be language economy, especially among students of English Language (and Literature). The influence of L1 might also be the cause of this error; when translated literally, this sentence in Croatian would read: *Spavam pet do šest sati dnevno.,* which is much more commonly heard in everyday speech than *Spavam između pet i šest sati dnevno.* Hence, participants most likely opted for the abovementioned translation, even though the sentence in Croatian included the preposition *između.* Another example where students of English Language (and Literature) and students of other departments and faculties made similar errors was sentence number six in the gap-filling task: *My grandfather has lived here _____ the 1950s.* Students of English Language (and Literature) made 11 errors of substitution, or 28.2%, by writing the prepositions *in* and *during* in the gap. Students of other departments and faculties made this type of error in 25 instances, by opting for prepositions *for, in, until, during, from, before* and *through.* Although the participants of the latter group made a greater number of errors and opted for a greater number of inappropriate prepositions, the cause of errors in both groups is most likely insufficient knowledge of the rules in English concerning tenses. Only the preposition *since* was accepted as the correct choice in this item, due to the presence of the Present Perfect Tense in the item. Since most of the alternative prepositions would be correct if another tense had been used in the item, the cause of numerous errors of substitution can be attributed to the insufficient knowledge of English tenses, especially among students of other departments and faculties, rather than a direct L1 influence. The third item where participants in both groups provided similar answers was item number eight in the gap-filling task, *They crossed the ocean in _____ five hours.* Participants in both groups wrote similar answers in the gaps, including *under, about, less than* and *'0'.* Students of English Language (and Literature) decided upon the answer

'0' in a greater number of cases then the other group of students; the reasoning behind this might be the fact that participants in this group had a better understanding of the sentence *They crossed the ocean in five hours.* than the participants in the other group, who possibly considered they needed to provide an answer. However, the answers were similar and the percentage of correct answers in this item was high in both groups.

The greatest difference among answers in the two groups was the fact that students of English Language (and Literature) made no errors in several items, both in the translation and the gap-filling task, while students of other departments and faculties made errors in every item in both tasks. This finding was to be expected; students of English Language (and Literature) were likely to make no errors in simple items in both tasks, while students of other departments and faculties, due to the difference in their proficiency levels, were expected to make errors even in items that were not as difficult. Furthermore, students of English Language (and Literature) made the errors of substitution and omission, while students of other departments and faculties made errors of redundancy and thirteen invalid answers, as well. This difference might be attributed to the fact that students of other departments and faculties made a greater number of errors in general, hence the types of errors are expected to be more versatile. Even though the participants in both groups made similar errors in the gap-filling task, while the most common error in the translation task among students of English Language (and Literature) was found in the third sentence, *Spavam između pet i šest sati dnevno.,* the item where students of other departments and faculties made the greatest number of errors was item number four: *Škola počinje u ponedjeljak.* The most common error type in this item was substitution, with participants translating the sentence using the prepositions *at* and *in*. Most errors were found in the English renditions containing the preposition *at* (*School starts at Monday*). The usage of the preposition *in* can be attributed to L1 influence, or literal translation (*Škola počinje u ponedjeljak*). The other alternative, or the usage of the preposition *at* might be attributed to the

overgeneralization of its meaning; while the preposition *on* is most commonly used when talking about days, the preposition *at* signifies a point in time. Hence, the overgeneralization of the meaning of 'a point in time' resulted in the abovementioned errors. This error can also be seen as a result of insufficient knowledge; without the understanding of the meaning of both prepositions, as well as their appropriate usage, the two meanings are likely to be considered interchangeable. Particularly in this case, the errors were most likely made due to the insufficient knowledge of which preposition is more suitable when talking about days and which is more suitable when talking about the time.

Given the results, a significant difference in the number of errors between the two groups is present. However, the types and possible reasons behind those errors do not differ significantly between the two groups of participants. In the items of both tasks, and among participants in both groups, similar answers were found, both correct and incorrect. The greatest difference between the two groups is, as mentioned previously, the number of errors. These findings show that, although students of other departments and faculties made more errors than the students of English Language (and Literature), those errors do not differ significantly between the two groups. This could be attributed to the instrument in this study; the items in both the translation and gap-filling task were relatively simple and the target prepositions were commonly used ones. Furthermore, the students of other departments and faculties estimated their level of proficiency in the English language as intermediate in most cases, so if this is considered, the difference between the two groups, or lack thereof, is to be expected. However, the number of participants and items in the test is not sufficient in order to make any definitive claims about the subject. A greater number of participants, and a study of a greater scope in general, would be necessary to determine other possible factors that might influence the results.

6. Conclusion

This study aimed to determine the frequency and percentage of errors in the usage of temporal prepositions among students in Croatia who speak the English language, as well as types of those errors and the frequency of each type. It also aimed to determine possible reasons behind certain errors, as well as the difference in the frequency and type of errors between students of English Language (and Literature) and students of other departments and faculties. Overall, the results showed that participants made 15.58 % of errors in the usage of temporal prepositions, hence the majority of their answers were correct. Furthermore, the most common error type was substitution, not only due to L1 influence, but overgeneralization or insufficient knowledge of the rules. Students of English Language (and Literature) made statistically significant lesser number of errors that students of other departments and faculties, however, the type of those errors, as well as their possible causes, did not differ significantly between the two groups. Although this study provided some useful insight into the way Croatian speakers of English use temporal prepositions, and it shed light on the relationship between the type of university and number of errors, it has limitations. The greatest limitation of the study is the manner in which it was conducted. Due to the Covid-19 pandemic, the study needed to be conducted online, via Goggle Forms. This form of online instrument administration is not entirely suitable for this type of research. There is almost no control over the participants and their answers. Furthermore, some items in the test were constructed in a way that allowed for numerous different answers, which in turn allowed for more correct answers. Many participants, primarily students of other departments or faculties, made numerous errors in the translation task, from spelling errors to lexical or grammatical errors, in the form of wrong choice of articles, tenses or words. However, the analysis of such errors was outside of the scope of this research, so the analysis was based exclusively on the usage (or lack thereof) of temporal prepositions. All the

mentioned limitations might influence the validity and reliability of the study, so further research is necessary to allow for making claims about the presented results.

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Appendix

Translation task

1. Predavanje počinje u 13 sati. (Class starts AT 13 p.m.)

2. Automobili su na raskrižju. (Cars are AT the crossroads.)

3. Bacio je loptu na nju. (He threw the ball AT her).

4. Tanjuri su na stolu. (Plates are ON the table.)

5. Škola počinje u ponedjeljak. (School starts ON Monday.)

6. Knjiga je u sobi. (The book is IN the room.)

7. Zimi je jako hladno. (It is very cold IN the winter.)

8. Ti su događaji iza nas. (The events are BEHIND us.)

9. Jastuk je iza kreveta. (The pillow is BEHIND the bed.)

10. Spavam između pet i šest sati dnevno. (I sleep BETWEEN five and six hours per day/per night/every day/every night.)

11. Lopta je između stola i stolice. (The ball is BETWEEN the table and the chair.)

12. Pogledao je kroz prozor. / He looked THROUGH/OUT the window.

13. Ne znam značenje ove riječi. / I don't know the meaning OF this word.

14. Slijedili su ih uz stepenice. / They followed them UP the stairs.

15. Automobil se zabio u zid. / The car crashed INTO the wall.

16. Automobili su parkirani uzduž travnjaka. / Cars are parked ALONGSIDE/ALONG the lawn.

17. Misli i na mene. / Think ABOUT/OF me, too.

18. Postoji drugi naziv za ovo. / There is another name FOR this.

19. Putovali smo autobusom. / We traveled BY bus.

20. Pogodite što mislimo iz konteksta. / Guess what we mean FROM the context.

21. Zaprosio ju je tijekom odmora u Italiji. / He proposed to her DURING their vacation in Italy.

Gap-filling task

1. We are going ___ Zagreb next week. (TO)
2. He works from 9 a.m. ___ 5 p.m. (TO)
3. It boils down ___ this: you need to work harder! (TO)

1. We live 100 meters ___ the beach. (FROM)
2. She will be absent ___ Monday until Thursday. (FROM)
3. Do not shy away ___ hard work! (FROM)

1. We can drive ___ the church to admire the architecture. (BY)
2. You must check-out of the hotel room ___ 10 a.m. (BY)
3. I swear ___ this book when it comes to learning Italian. (BY)

1. The river flows ___ the bridge. (UNDER)
2. They crossed the ocean in ___ five hours. (UNDER)
3. She fell ___ his spell. (UNDER)

1. ___ ten meters, turn right. (AFTER)
2. I feel tired ___ three hours of studying. (AFTER)
3. My dog is sick; I need to look ___ him. (AFTER)

1. She jumped ___ the bridge. (OVER)

2. We will be away ___ the week. (OVER)

3. They prefer English ___ Spanish. (OVER)

1. We walked ___ 5 hours. (FOR)

2. She ran ___ 8 miles. (FOR)

3. This gift was not intended ___ you. (FOR)

1. I do not like speaking ___ a big audience. (BEFORE / IN FRONT OF/)

2. I always talk to my best friend ___ going to bed. (BEFORE)

3. She has always put work ___ fun. (BEFORE)

1. I will wait ___ midnight for you. (UNTIL)

2. My grandfather has lived here ___ the 1950s. (SINCE)

3. I only saw him once ___ my stay in London. (DURING)

4. The doorbell rang ___ we were sleeping. (WHILE)

1. Peel the apple ___ a knife. (WITH)

2. Please, keep ___ touch! (IN)