

Universidad de Valladolid Facultad de Filosofía y Letras Grado en Estudios Ingleses

TIME AND PLACE PREPOSITIONS: A STUDY ON THEIR MEANINGS AND LEARNING METHODS

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Abstract

Prepositions are considered to be a complex grammatical category in the English

language, and a lot of investigation has been conducted and is still ongoing. Experts in

the study of prepositions propose different materials offered to EFL students and teachers

for the study of these prepositions. This dissertation presents a bibliographic study on the

meanings that field experts have provided on the English prepositions. This investigation

will also include an analysis of the accessibility of English prepositions for EFL learners

and teachers. This dissertation aims to analyse the information available from English

corpora, textbooks, the internet, and Artificial Intelligence sources, and examine them as

teaching materials. However, English prepositions and their teaching materials are still a

topic of investigation. For this reason, the research done is still open to further study.

Keywords: English prepositions, EFL, Teaching, Learning, AI, English corpus.

Resumen

Las preposiciones son consideradas una categoría gramatical compleja en la lengua

inglesa, y es por ello por lo que se ha realizado y se sigue realizando una extensa

investigación sobre ellas. Los expertos en la materia han propuesto diferentes métodos de

enseñanza y estudio para las preposiciones en la lengua extranjera inglesa. Este TFG

propone un estudio bibliográfico sobre los significados que estos expertos han

proporcionado para las preposiciones en la lengua inglesa. Además, se incluye también

un análisis de las diferentes fuentes disponibles para profesores y estudiantes del inglés

como lengua extranjera. El objetivo de este proyecto es analizar la información de los

corpus del inglés, libros de texto, internet e Inteligencia Artificial y sobre cómo tenerlos

en cuenta como herramientas de enseñanza. Sin embargo, las preposiciones y sus

materiales de enseñanza siguen siendo investigados, por lo que la investigación hecha

sigue abierta para futuros estudios.

Palabras clave: Preposiciones en lengua inglesa, Inglés como lengua extranjera,

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Enseñanza, Aprendizaje, Inteligencia artificial, Corpus del inglés.

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1. INTRODUCTION

As any other part of speech, English prepositions play a crucial role for English as a foreign language (EFL) students to understand and make correct use of the English language. In order to achieve a proficiency English level, it is important that EFL students understand the meaning and uses of the English prepositions (Stoian, 2024). Prepositions are considered to be a complex part of speech and, as a consequence, a category worth studying. Stoian (2024) affirms that prepositions are the connections that help to create a sense and give meaning to a sentence. English prepositions can be classified into multiple meanings and categories, which are complex for an EFL student; thus why they are worth considering them states Stoian (2024).

Furthermore, the meaning of prepositions, considering them from a semantic, syntactic and cognitive point of view, can be interpreted differently. Evans and Tyler (2003) explain that life is in constant change, and language changes and evolves with it. Evans and Tyler (2003) take as an example the preposition "over" to which they assign four different meanings. Their purpose is to explain the different explanations given over time to these meanings, proving them to be erroneous or not consistent enough to be considered as right. Evans and Tyler (2003) assume and explain why the polysemic theory should be considered a valid theory when studying prepositions. To illustrate the explanation, they demonstrate that English speakers unconsciously assign different meanings and interpretations to prepositions, based on their personal experiences and views of the real world.

Additionally, and as it has been stated before, prepositions are a word category that has multiple meanings and that is still being studied. Evans and Tyler (2003), in their book, analyse prepositions from a polysemic point of view. As I have explained before, they state that prepositions provide a logical meaning to a sense, and the understanding and meaning we give to them is based on our personal experience of the world. Evans and Tyler (2003) interpret prepositions from a spatial perspective. Their initial description is based on how we as speakers use language, focusing on linguistic spatial relations. By making use of the

different prepositions and seeing them as links between other elements in the sentence. These elements are presented as a landmark¹ (LM) and trajector² (TR). Evans and Tyler (2003) then suggest a polysemic analysis of prepositions, with non-spatial relations, of the different prepositions the English language presents.

This dissertation aims to analyse how place and time prepositions are traditionally taught and alternative materials for learning and teaching these prepositions to EFL students. Through this analysis, I expect to find new forms that, in the future, may be available as teaching resources in EFL classes. This dissertation will be presented in this manner. Section two will present the literature review in which I have considered the meaning and uses of prepositions, along with different methodologies and tools used for teaching prepositions, including some case studies in which the different methodologies are investigated. Sections four and five will describe the materials and data collected for the analysis, including the results obtained, always bearing in mind the research questions stated in section three. Finally, there will be a description of the conclusions obtained through the investigation.

2. LITERATURE REVIEW

2.1 Theoretical framework: understanding prepositions and their meanings

Prepositions are known to be part of the word categories known as functional words. However, some people also consider them to be part of the English lexical categories. For this reason, their correct teaching for English as a foreign language students is important. According to K. C. Litkowski (2002), prepositions can be defined as units of one or more words that are used for connecting phrases, usually noun phrases, and giving context in a sentence. K. C. Litkowski (2002) also states that many English prepositions share the same meaning and can be used interchangeably, having, as a result, the possibility of many prepositions that can be defined in a similar form but used in completely different contexts. On the other hand, K. Litkowski & Hargraves (2021) explain

¹ According to Peña Cervel (1998) is the reference in which the TR is contained.

² The underlined element contained by the LM (Peña Cervel, 1998).

that there are 847 meanings when talking about prepositions. It is necessary to make a classification based on the syntactic and semantic role they hold, based on the context and function they are assigned in the phrase in which the preposition is contained. This classification helps learners to make correct use and comprehend these meanings in relation to every English preposition.

For understanding the polysemy of the English prepositions, it is important to consider the preposition's original meaning and the context in which they are being used (Evans and Chilton, 2010). Evans and Chilton (2010) explain that for making correct use of the English prepositions, the different elements presented within a sentence should be considered, for instance, the spatial relationship between the landmark (LM) and the trajector (TR). "The cat is in the box". This sentence illustrates the landmark-trajector relationship and the use of the preposition in. The box represents the LM, working as a container, and the cat is the TR located in the LM. The need for making use of the preposition "in" is as follows, since we are talking about the locational relationship between two objects, a place preposition is needed. Additionally, it is known that the right preposition to be used is "in" because the TR is contained by the LM; thus, the right preposition is "in".

In addition to this, prepositions are often divided into groups to provide a better understanding of them. Tseng (2000) comes up with what could be a more formal linguistic analysis of prepositions. The division Tseng (2000) presents is mainly based on the relation that different prepositions maintain with other elements of the sentence and their context. For instance, prepositions can be classified depending on whether they are considered lexical³ or functional⁴. Tseng (2000) also classifies prepositions in relation to their meaning, i.e., how other lexical elements in the phrase affect prepositions, and in what ways their use provides a correct or incorrect sentence. This last form of classification provides a closer approach to a method of teaching prepositions to L2 English language speakers. Srikumar & Roth (2013) divide prepositions in a simpler manner. As it is explained in their paper, prepositions can be divided into groups that can vary

³ They contain meaning inside and in relation to other lexical units in the sentence.

⁴ They work as connectors for giving a more coherent sense to the sentence.

depending on the relationship with other lexical units in the sentence, as well as taking into account the sense they have. The instances that Srikumar & Roth (2013) offer, exemplify that prepositions inside the same category (for instance, time, space, movement...) are not interchangeable. However, prepositions belonging to the same category can share the purpose they have in a sentence, together with their general function and meaning. Srikumar and Roth (2013) describe prepositions belonging to the category of location. They use multiple prepositions that are part of the category of location, as "in," "on," "at," "inside," etc. Srikumar & Roth (2013) explain that in this category, all the prepositions are used to describe both physical and figurative locations. Srikumar and Roth (2013) say that even though these prepositions have the same use, each one of them has a different meaning.

As it has been explained before, prepositions can be grouped depending on their meaning, and Evans and Tyler (2003) consider them to be polysemic. Both Rice (1992) and Richard-Bollans et al. (2020) agree with the idea that prepositions should be seen as polysemic words. They observe that polysemy can appear in a more marked form, resembling the concept of homonymy⁵, or in a less notable manner, meaning that one single preposition can have multiple uses and categories, but they are somehow related. Rice (1992) and Richard-Bollans et al. (2020) agree that the best approach for studying prepositions is this last one. Both papers explain that due to the polysemy and the similar meaning and use of the prepositions that belong to the same category, it is problematic to establish their differences and their relation to other lexical units.

Taliancich-Klinger et al. (2018) provide a detailed description of the Spanish prepositions in comparison to the English ones and how these affect non-native speakers. Taliancich-Klinger et al. (2018) begin comparing the Spanish and English grammar, primarily focusing on prepositions. They show that due to the large number of uses for English prepositions, Spanish has the need of combining multiple prepositions in order to create an equivalent for an English preposition. There is not only a combination of Spanish prepositions but also, in Spanish, one preposition can have translations to more than one English preposition, as it is the

⁵ Words that have more than one unrelated meaning (Rice, p. 89, 1992)

case in the preposition "en" which is the equivalent of "in," "on," and "at", leading to difficulties when using them. This dissertation will consider how these three prepositions are learned by EFL students. Taliancich-Klinger et al. (2018) also explain how a person who speaks more than one language can have a positive influence when using prepositions in English. They state that when a person is exposed to different languages, the possibilities of a better understanding and performance when using prepositions become higher.

As mentioned before, the English prepositions "in", "on", and "at" are among the most frequently used in the English language. The three of them have the same equivalent word in Spanish, "en". This translation, and the multiple meanings these prepositions have, becomes a problem when EFL students learn prepositions. Todorova (2023) divides and classifies "in", "on", and "at", taking into consideration their functions.

To begin with, Todorova (2023) states that the preposition "in" can describe space (it describe objects or people contained in a landmark or producing movement, e.g., I slept in the train), it also describes time (it either talks about a long period of time 'in summer' or a short period of a finished action 'in the first second after the accident'), and manner (it expresses quantity and the instrument by which an action occurs, as well as for stating how somebody behaves). To continue, Todorova (2023) talks about the preposition "on". She explains that this preposition resembles the previous one. As it happens with "in", Todorova (2023) divides "on" into space (it describes something being on a surface, static. This can have a negative connotation), time (talks about close events, or specific moments in the day 'on the afternoon'), and manner (it is used as a metaphor for expressing the purpose of the action). Finally, Todorova (2023) classifies the preposition "at". She shows that this one is the most different, and she explains the preposition in four groups. The first three are the same used for "in" and "on", space (at is used for talking about a view of an action, as well as metaphorically, for instance, the weather), time (a planned and exact moment 'at five o'clock' or the beginning and end of a period), manner (states somebody's abilities), and cause, an added, category (it talks about an external reaction to an object or action).

This dissertation will analyse how the time and place prepositions "in," "on," and "at" are presented in different EFL studying and teaching materials. This analysis will also go through the explanations and exercises that textbooks, websites, and other materials offer to EFL students and teachers on different levels. Additionally, I will explore the polysemy of prepositions and check if it is present in traditional EFL teaching materials as well as in the alternative teaching materials that will be presented throughout this dissertation.

2.2 Pedagogical approaches to teaching prepositions and the most common students' errors

Traditionally, prepositions directed to EFL students have been taught by providing a list and a brief explanation for each one of them. When teaching English prepositions using traditional materials, e.g., textbooks, lists, written documents, etc., it is observed that no specific explanation is provided about the relations that the prepositions belonging to multiple categories (time, movement, or space) might have. Additionally, the lists provided in school textbooks do not state the multiple meanings that just one preposition has for a simple category, including only the most relevant meaning and some examples for clarifying this use. According to Lorincz & Gordon (2012), the lack of specification on the resources presented in schools can lead to understanding and usage problems of the correct preposition in each context for EFL students, as the students are not able to interpret the prepositions correctly, taking the different meanings in isolation. This understanding adjusts to be part of the homonymy view of prepositions, which has been proven as erroneous in the previous section of this dissertation.

Llopis-García and Piquer-Píriz (2024) talk about the studies that have been conducted on applied cognitive linguistics, including the problems that are presented when conducting them. Llopis-García and Piquer-Píriz (2024) analyse different studies conducted with EFL students at different levels. Although these studies were mostly in relation to English vocabulary and idioms, some of them focus on the understanding of the polysemic meanings of prepositions and how this polysemy is taught. It is important to say that the studies that were analysed

also differ in the number of students tested. After the review of these studies, Llopis-García and Piquer-Píriz (2024) concluded that even though students tested with the applied cognitive linguistic method showed some improvement, it was not remarkable compared to the control group results (the students who learned with the traditional method). Proving that applied cognitive linguistics is not as effective as it should be and should be improved.

As it has been observed before, the different prepositions have a large number of senses and uses that relate to each other, thus why their study and learning for L2 English speakers is known for being challenging. Shuell (1986) makes a comparison between the two types of learning that might be employed when studying a language, traditional learning vs cognitive learning. Shuell (1986) explains that traditional learning involves a change of behaviour in a person based on skills and knowledge that they might have acquired. In contrast with cognitive learning, which mostly focuses on the behaviour of the individual, for instance, his/her necessity or personal decision for learning a language or previous experiences lived. Traditional learning advancement is observed in the performance the individual has in the different tasks, which are only in relation to grammatical features, rather than in the behavioural change. Shuell (1986) observed that a cognitive language learning approach is more effective in L2 students. Nonetheless, Shuell (1986) does not completely affirm its effectiveness as this form of learning is somehow recent, and a lot of research has not been done on it. Throughout language history, multiple research projects on cognitive learning have been done in order to demonstrate its reliability and effectiveness.

In addition to the individuality when teaching prepositions, Omenogor et al. (2024) state that EFL learners tend to translate English prepositions to their native language. In some cases, this translation is effective, and learners get a general understanding of the prepositions, as there are similarities with other languages. However, Omenogor et al. (2024) clarify that when translating prepositions, people misunderstand their meaning and make a wrong use of them, by changing, omitting the prepositions, or even adding them when it is not necessary. Omenogor et al. (2024), alongside with the ideas exposed by Saravanan

(2014), illustrate that there is a large number of languages that are post-positional⁶. They also state that the lack of study and practice in traditional EFL teaching forms might lead to an incorrect understanding of the English prepositions and also a considerable number of mistakes when producing them.

Traditional teaching and a lack of practice usually lead to misunderstanding and mistakes when using prepositions in the English language that are failed to be rectified as the English level improves. Diop (2022), after practising for many years traditional teaching and practising prepositions, and observing that progress was minimal, proposed a new method of preposition practice. Diop (2022) presents the Ghost House, a traditional game that is adapted to the required grammar, in this specific case, prepositions. Ghost House is a roleplaying game in which students actively engage in the class. Diop (2022) explains the dynamic of the game; one student plays the role of ghost. He/she "steals" an object which is located in the class and places it somewhere else, inside the class as well. The other students have to ask questions using prepositions until they find the object. Diop (2022) explains that the teacher should present the game and carefully explain the children how they are going to play. After that, the game will start, and prepositions will be learned involving the active participation and practice of the whole class. The game proposed by Diop (2022) uses kinaesthetic learning. Kinaesthetic learning is a method in which students learn English grammar and vocabulary through movement. According to Dalimier et al. (2019), kinaesthetic learning improves cognitive learning. They explain that, through movement, students are more present and more engaged in the class, enhancing active learning. Dalimier et al. (2019) state that kinesthetic learning activates the brain, resulting in better language performance for the students.

Diez et al. (2011) analyse the L1 Spanish speakers' performance regarding English as an L2 from different levels. Diez et al. (2011) start their study at a primary school level, around the age of 6 years old, and go up to the last university year, frequently 22 years old. In their analysis, they show how the most frequent mistake among every group is the production of prepositions. Diez et al. (2011) explain that there are multiple similarities between Spanish and English

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⁶ The preposition is added after the noun in the phrase instead of before.

prepositions. Nevertheless, the importance that they are given when teaching them causes mistakes. As it has been explained earlier in this paper, the number of Spanish prepositions is smaller than the English number and they are not used with the same frequency, because of this, when teaching EFL prepositions, students do not understand their senses and uses. Diez et al. (2011) explain that low-level English students try to make a one-to-one preposition relationship, failing to understand them. On the other hand, university students have the capacity to understand the meanings and senses of prepositions individually. Nevertheless, in written language, they do not perform fluently and naturally, proving that there has not been a correct understanding of the English prepositions.

As said before, I will analyse the polysemy and explanations of the English prepositions in different EFL teaching and learning materials. This dissertation will make a comparison of the explanations made on prepositions in a variety of teaching methods. Some instances of these materials are school textbooks, official entities' websites, English corpora, or artificial intelligence (AI) materials.

2.3 Role of Artificial Intelligence in EFL teaching and learning

At this moment, Artificial Intelligence (AI) has become a significant resource for everyday life, including education and language learning. This deed cannot be avoided; hence why both teachers and students can employ AI as a useful resource in different fields of education. Harry (2023) describes the different improvements in the educational sector that can be carried out by making use of AI. Harry's (2023) essay is divided into three main fields that can be improved with the use of AI, but I will only focus on two. The first one talks about offering personalised teaching for each student. By generating a lesson that can be adapted to every student's level, the percentage of student improvement has increased as they get a higher grade of engagement with the class, providing a better understanding and performance in relation to the topic being explained. The second advantage that Harry (2023) explains is the AI chatbots. By making use of these elements, students can get an automatic answer to almost everything they ask for. As Harry (2023) states, chatbots can be programmed by teachers and

different institutions to solve any doubts students may have outside of the class time. The chatbots benefit learning so that the students can get personalised feedback for continuing with their study independently.

Even though AI is a significant improvement for the education system, it is a fact that this resource is relatively new, and therefore, there might be some challenges towards its use. As it is explained in Chima Abimbola Eden et al. (2024) paper, multiple troubles can be encountered when using AI in education. To begin with, Chima Abimbola Eden et al. (2024) divide the problems into two groups. The first group are technology-related, i. e. privacy and security concerns. Chima Abimbola Eden et al. (2024) observe that personal data of both the students and the institutions are introduced to the AI machine. This action may be unsafe as there can be failures in the program, as well as people trying to compromise the data that has been introduced. The second group that Chima Abimbola Eden et al. (2024) mention are student-related problems. Inside a class, the different students there might usually come from different contexts and backgrounds, meaning they may not have the same opportunities for accessing AI tools. Chima Abimbola Eden et al. (2024) say that in order to make use of this resource in the class, teachers must make sure that every student has the same access to it. Furthermore, the AI machine has to be programmed, requiring student information; as a result, a consent form should be filled out and signed by both the parents and the students. Finally, Chima Abimbola Eden et al. (2024) place emphasis on the fact that both the students and the AI are in constant change. Because of this, a frequent revision of this tool should be made, carrying out the necessary adaptations for fitting the student's knowledge and progress.

Talking about the improvements made in AI and innovative technologies, EFL learners and teachers can benefit from this. Rebolledo Font de la Vall & González Araya (2023) illustrate that for making a beneficial use of AI, teachers should be properly trained to maximise de advantages. By making proper use of AI in EFL teaching, the preparation time would decrease, leaving more time for teachers to focus on other aspects of the class. Furthermore, Rebolledo Font de la Vall & González Araya (2023) explain that teachers can use this resource as a form of solving and clarifying doubts from both sides instantly, creating a bigger

fluency when delivering a class. Rebolledo Font de la Vall & González Araya (2023) talk as well about the impact AI has when learning a language, including English. They observe that the use of these devices makes learning easier, as students can focus on the several elements they want to improve, e.g. grammar, vocabulary, or even speaking. Due to the improvements made, a fluent conversational practice with an AI device can be used, providing a closer approach to a native speaker's language and accent, as well as getting familiarised with cultural factors, creating real-life scenarios that can be applied to everyday situations. What is more, Rebolledo Font de la Vall & González Araya (2023) explain that AI can be accessed easily, at any time and place, usually for free or paying a low fee for the AI services (any phone or computer with an internet connection can have access to these devices). In addition to this, Rebolledo Font de la Vall & González Araya (2023) found out that AI is also useful for people interested in learning multiple languages at the same time. They can learn two or more languages simultaneously, keeping the information provided by the machine organised into the different languages and grammatical categories.

Fitria (2021) shows that there are multiple technologies and applications that apply artificial intelligence. Fitria (2021) also talks about how the students of a second language, English in this case, who may have any language as their mother tongue, can benefit by making use of these technologies and also develop a more correct and independent English study. Fitria (2021) provides 8 different AI tools that might help EFL students. The first device Fitria (2021) comments on is Google Translate. This free tool is able to instantly translate words, sentences, or even full texts from more than 50 languages into English. Fitria (2021) explains that students can learn new English vocabulary, correct frequent errors they might have in their spelling and grammar production, and get a better understanding of word pronunciation. The second device Fitria (2021) mentions is *Text to Speech*, a Google Translate element which reproduces a text orally with a neutral English accent. This instrument is an innovative idea for allowing students to learn the correct pronunciation, as well as practice and repeat it to get a close to native English pronunciation level. The third device that Fitria (2021) comments on are Chatbots, as it can be ChatGPT or Microsoft Copilot, which are used as both oral

and written conversational support. This is a form for students to realise, correct, and minimise their errors in the English language. Finally, Fitria (2021) considers the phone application *Duolingo*. This application is used by people worldwide for learning different languages, having English as the most popular language learnt. Fitria (2021) explains that *Duolingo* provides level testing as well as short game-based lessons so that EFL learners are able to improve their level by adapting their learning pace to their needs.

As in textbooks and internet websites, AI can give an explanation of time and place prepositions. By introducing a specific prompt, teachers and students can get a logical explanation which is similar to the ones given in other EFL materials. This dissertation will focus on two AI devices, *ChatGPT* and *Microsoft Copilot*. For this analysis, I will think and introduce a prompt in these two devices in order to analyse and compare the content of the answers provided by both tools.

2.4 Practical implications, case studies of EFL teaching materials

Llopis-García (2024) shows that even though we know that applied cognitive linguistics (ACL) is a good method for L2 teaching, we cannot be fully certain about it, as not enough case studies have been carried out to prove this. Llopis-García (2024) also states that this method of teaching is still being developed, and we need to take into consideration both the perspective of the teachers and the students, as well as the current teaching and evaluation materials. In the same book, Llopis-García (2024) exemplifies the ACL materials with a case study on Spanish language students. Llopis-García (2024) proposes a series of classes based on an explanation of Spanish verbs using ACL learning materials, with visual materials, e.g., pictures, GIFs, and other grammatical expressions, for instance, metaphors and idioms. Furthermore, the explanations provided included specific terminology from the ACL teaching method, and the exercises used for testing were completely new for the students, meaning that these exercises were based on the understanding of the topic rather than on memorisation. Llopis-García (2024) concluded that the students who were taught with the ACL method showed a significant improvement in the use of Spanish verbs in comparison to the ones taught with the traditional materials and exercises. This shows that although ACL needs improvement and more case studies are required, it is a useful method for teaching a second language.

As it has been observed on multiple occasions throughout this dissertation, English prepositions are a wide topic that produces challenges to EFL students when learning them at various levels. Teachers from different educational levels find it demanding when providing a correct lesson on prepositions. A case study was done on 50 university teachers by Rajappan & Annapurani (2023). He proposed a number of questions to different teachers who came from different backgrounds in order to come up with a conclusion on why the student did not achieve a correct learning of prepositions. Rajappan & Annapurani (2023) study concluded that even though prepositions are shown in textbooks and are explained in class, the relevance and explanation given are brief. This is why teachers have problems delivering the correct knowledge on prepositions. Furthermore, Rajappan & Annapurani (2023) shows that students are likely to translate to their L1 and predict prepositions when there is a lack of understanding, making it even harder to achieve a correct learning in the class.

Every student who has an L1 other than English presents the same challenges when learning English prepositions. Sudhakaran (2015) conducted a study on a group of Malaysian first-year university students. According to Sudhakaran (2015), Malaysian EFL teaching has become more relevant in the past years. Nevertheless, neither teachers nor students focus on English grammar; instead, they focus on communicative abilities, leading to mistakes when producing the language. For the Sudhakaran (2015) study, students of a medium to high level were picked. Most of them improved their performance after actively practising the grammar and the English language in general. After this case study, Sudhakaran (2015) concluded that non-native teachers, combined with a lack of practice and exposure to the language, increased the grammatical and prepositional errors when producing English language.

There are multiple methods and materials for teaching and learning EFL. However, experts have not concluded and do not agree on which one has the most effective results. This dissertation will focus on a variety of materials and will examine how experts on the subject consider their efficacy and impact for EFL teachers and students.

3. RESEARCH QUESTIONS

- How are the English prepositions "in," "on," and "at" presented in an English corpus?
- How are English prepositions proposed for EFL students in textbooks?
- Are there any other resources that are useful for prepositions learning, different from the textbooks available?
- Does the AI provide us with accurate and new information for the study of prepositions?

4. DATA AND METHODOLOGY

In this part of the dissertation, I will analyse the prepositions "in," "on," and "at" from a teaching and learning perspective. For doing this, I will conduct a research on corpora, textbooks, websites, and artificial intelligence tools.

4.1 Collection of data

To begin with, the most important part for conducting this research on prepositions was to determine the frequency of the prepositions "in," "on," and "at", along with their collocations and contexts within a sentence. For obtaining this information, I have used the Corpus of Contemporary American English (COCA). As Roslim & Mukundan (2011) explain, the creation of English corpora is important not only for analysing frequency and the context in which words may appear⁷, in this case, prepositions, but also they are significant for teaching purposes, as it can be the creation of school textbooks. Additionally, corpora used in a class context are relevant for giving real-life scenarios and context in which the word category being considered is in constant use, as Curry & McEnery (2025) explicate. Curry & McEnery (2025) also state that corpora are relevant materials for creating a class. They explain that teachers can use an already created corpus

⁷ Considering the preceding and following word categories of the word under analysis.

for providing examples and creating exercises. Moreover, Curry & McEnery (2025) expound that the creation of a corpus based on the sentences produced by the students can be used as a resource for identifying and revising students' errors when using the English language.

As I have said before, I have checked the frequency of the prepositions "in," "on", and "at" by using the English corpus, COCA. I have checked the user's manual (Wechsler, 2018), which is updated on the internet, for the corpus used. After having a clear understanding of how to use it, I first entered the prepositions by themselves to see what result I obtained. Out of every function the corpus has, I have selected the category labelled as "word", obtaining different results on the definition of the preposition searched, their frequency of usage, or the grammatical category it usually goes along with. Nevertheless, the instances obtained were not useful for learning about the context of the preposition, and the need to consider the context in which a preposition might appear was found, taking the lack of context as a reference, I have searched the context and frequency of "in," "on," and "at" collocated with a noun. Even though there was still a large number of utterances, the search results were more successful.

I have also analysed English textbooks from a low to intermediate level (A2, B1, and B1+), their grammatical content, and some activities that appear in relation to the grammar taught. The textbooks chosen belong to Spanish primary and secondary education, online books, and extracurricular EFL academies. Nowadays, EFL classes are mostly directed by a textbook, they are usually part of the curriculum for the course, indicating what and when to teach the content. For doing this, it is important to choose the correct textbook that is adequate to the class level, up to date, and that includes the contents that must be delivered in the class (Wen-Cheng et al., 2011). On the other hand, Llopis-García (2024) considers that textbooks are not essential for teaching EFL students. She states that these textbooks are organised by cultural topics (e.g., food, sports...) rather than by grammatical categories, a fact that may delay the students' full understanding of a specific grammar category (for instance, prepositions or verb tenses).

Complementary to school textbooks, I have used some publicly available internet resources. The results obtained, after an online search on time and place

prepositions, were very extensive. For this reason, I have decided to explore two websites that propose an explanation of the English prepositions "in," "on," and "at. The first website I have used is the University of Victoria, a high educational institution that focuses on many areas of study, including teaching and linguistic areas. This university provides a PDF document with a detailed explanation and exercises on prepositions. The second source I have utilised is the British Council webpage. I have decided to use this resource as the British Council is an official organisation that focuses on education and English language teaching. The British Council provides two website entries with an explanation and exercises for the time and place prepositions.

The last resource I have used has been Artificial Intelligence (AI). It is important to note where AI comes from. Alonso Arévalo & Marlene Quinde Cordero (2023) remark on the big impact AI has had in the past years and how it is still in development. They explain that AI results are obtained from different websites, books and articles that are available on the internet. AI analyses all the resources accessible and provides a human-like answer to the prompt given (Arévalo & Marlene Quinde Cordero, 2023). For obtaining a successful result from an AI machine, it is important to consider in detail the prompt that will be used. EFL Café website (2024) makes some recommendations for inserting the most correct and accurate prompt. This website says that the prompt to be accurate to the topic of study, grammatically correct (if the prompt has grammatical errors, the machine is likely to provide incomplete information), with a coherent structure (having every element necessary in a sentence, for instance, SVO), and preferably with a context.

This dissertation will consider two chatbots, *ChatGPT* and *Microsoft Copilot*. For the use of these two chatbots, I have registered with a personal account, instead of the account provided by the university. Furthermore, in the prompts used, and for getting the most neutral result, I have not specified that the results obtained were for a dissertation project. Considering the importance of the prompt and the object of analysis, the prepositions "in," "on," and "at", I have taken into account two prompts, each one of them referring to a different perspective, one being of a teacher and the other of a student. For creating the

prompt, I have considered three checkpoints. Firstly, I have thought about who might be writing the prompt, it can be a student, a teacher, or a person who is learning English autodidactically. Afterwards, I have dealt with the English level that will be analysed. For EFL students, there are multiple English levels that go from A1 to C2. As stated before, the focus for this dissertation will be on the levels A2, B1, and B1+. Finally, I have described the topic to be explained, time and place prepositions, more specifically "in," "on," and "at". The prompt introduced for the first time proposed satisfactory results. These results were similar to the ones obtained after checking the different textbooks and websites. For this reason, no other prompts were needed to be checked.

The first prompt I have used was from the perspective of the teacher. Following the steps mentioned above, and in order to obtain a successful answer from these two chatbots, I entered a specific prompt including the prepositions to be studied as well as the English level. After thinking about the different possible prompts, I have formulated it as "Act as if you were an English teacher in Spain and provide an explanation and some exercises for time and place prepositions "in, on, at" at an A2 level".

The second prompt used will take into consideration the student's point of view. For doing this, and following the same procedure, the prompt to be used will be "I am an English A2 student who needs to improve the time and place prepositions "in, on, at". Give me a detailed explanation with examples and exercises". For the creation of this prompt, I had the need to be more specific, since I was taking the perspective of a student, the prompt introduced placed focus on an objective, which has been improving the use of these prepositions.

5. DISCUSSION OF RESULTS

For the last section of this dissertation, I will discuss the results obtained when following the investigation described in the previous section. The investigation done has been ordered and will be answered in the same order as the research questions above have been proposed.

The first research question dealt with the possibility of learning about the frequency and the context of the prepositions analysed. As it can be seen in Figures 1, 2, and 3, by making use of the Corpus of Contemporary American English (COCA), information on the frequency of the preposition is given. Additionally, we can obtain definitions for the prepositions and some corresponding examples for learning about their use in context. Finally, we get input on which grammatical categories these prepositions are more likely to appear with, being a noun for the three prepositions.

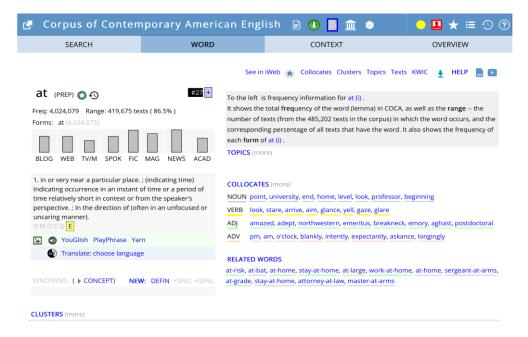


Figure 1. COCA's result of the preposition "at"

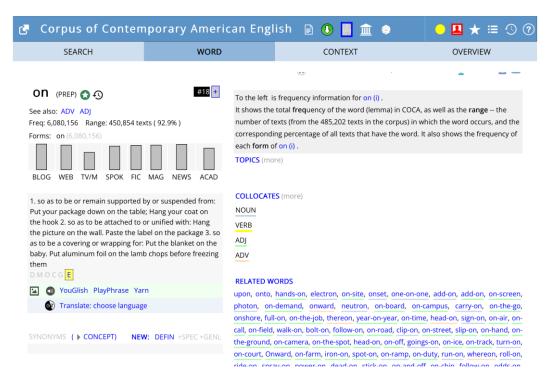


Figure 2. COCA's result of the preposition "on"



Figure 3. COCA's result for the preposition

The second research question poses its concern on how time and place prepositions are used in English textbooks. For the analysis, I have taken into account the levels A2, B1, and B1+. Every textbook I have considered lacked a detailed explanation of time and place prepositions. After doing my research on the different textbooks from the levels mentioned above, I have concluded that EFL textbooks present prepositions as a vocabulary section rather than a grammatical category. Agreeing with Llopis-García's (2024) opinion, school English textbooks are not a complete enough resource for the study of prepositions. Nonetheless, I have found an explanation for time prepositions in a B1+ English textbook. As it can be observed in Figure 4, and compared to Figures 5 and 6, the explanation provided in the textbook is shorter, including only one meaning these prepositions might have in this specific context. Moreover, the list of examples presented in the textbook is briefer than the one given on the websites. However, this textbook proposes other prepositions that can be used as synonyms.

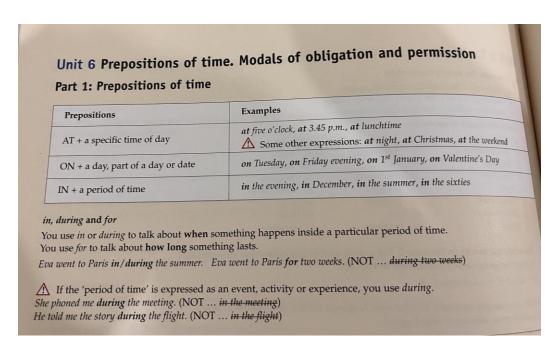


Figure 4. Time prepositions in a B1+ textbook

The third research question was concerned with the existence of other resources different from the school textbooks. As I have mentioned before, I have used two different websites that contain a detailed explanation of the prepositions "in," "on," and "at". The first source I have consulted was the University of Victoria website, where a document containing a description of the prepositions as a grammatical category was offered. This document also gives some advice for studying prepositions for EFL learners. The University of Victoria presents a classification of the uses of English prepositions, i.e. time, location, and connectors, with a brief description of the uses they have as well as some examples.

As it can be observed in Figures 5 and 6, the University of Victoria presents diverse charts with the specific function of the prepositions. In this case, the function of the previously mentioned prepositions will be related to time and place. It also includes the prepositions, in which context they might be used, and an example for each use in order to clarify. Both explanations provided in Figures 5 and 6 are clear and concise, making them an alternative material for EFL students and teachers.

Prepositions - Time

English	Usage	Example		
in	 months/seasons years time of day centuries and historical periods after a certain period of time 	 in August/in the summer in 1985 in the evening in the 19th century Mystic Market closes in two hours. 		
at	 time of days noon, night, and midnight names of mealtime age 	 at 2:30 at night at breakfast I learned how to use a computer at 12. 		
on	days of the week	• on Friday		

Figure 5. Explanation of "in, on, and at" as time prepositions

Prepositions - Place (Location and Direction)

English	Usage	Example		
in	 when something is in a place, it is inside it (enclosed within limits) 	 in class/in Victoria in the book in the car/in a taxi You look serious in this photo. 		
at	 located at a specific place (a point) for events place where you are to do something typical (watch a movie, study, work) 	at the libraryat a concert/at a partyat the cinema/at school/at work		
on	 being on a surface (not enclosed) for a certain side (left, right) for a floor in a building for public transport for television, radio 	 I left the keys on the table. Go down this hall to the end, turn right, and it's the third door on your left. My apartment is on the fourth floor. I forgot my phone on the bus. You can hear my brother on the radio. 		

Figure 6. Explanation of "in, on, and at" as place prepositions

As I have stated before, I will also consider the British Council webpage as an alternative material for studying prepositions. This webpage comes up with a clearer structure for explaining English prepositions. On the contrary to the University of Victoria, which creates a list of the different prepositions, their uses, and their meanings, with some exercises including every use, the British Council webpage proposes different web entries divided into the different uses these prepositions may have. For instance, one of the entries that can be found is in place prepositions, more exactly "in, on, and at".

Firstly, some sentences with the three prepositions mentioned above are given in order to let the students make an assumption on how these prepositions function as a location element. Subsequently, a short test exercise can be found. This test, proposed with a game layout, as it can be seen in Figures 7 and 8, proposes two types of exercises. The place prepositions entry offers a multiplechoice exercise, while the time prepositions exercises are proposed as a fill-in-thegap format. In both instances, there is a correction stating the number of answers the student has successfully answered and the correction for every sentence proposed. This game-based evaluation system activates students' conscious learning, using logical deductions made out of theory instead of the traditional memorisation method. After testing their knowledge on the prepositions, an explanation for the different uses, including examples, is provided. These resources are also good materials for autodidactic students, who might have difficulties accessing traditional materials (textbooks), to learn and get an understanding of English prepositions independently, but it is also an interesting tool for teachers who have to deliver a class on this topic. Finally, another exercise based on the previous explanation is provided for checking if the knowledge acquired is correct.

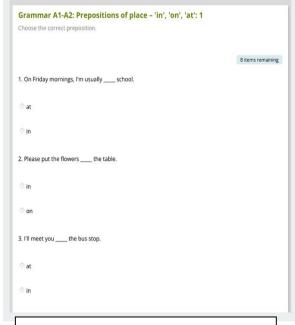


Figure 7. Multiple choice exercise for place prepositions

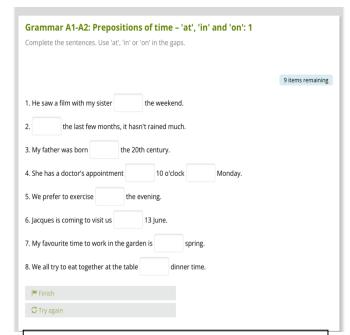


Figure 8. Time prepositions fill the gap exercise

The fourth and last question proposed was on the use of Artificial Intelligence (AI) in EFL teaching and learning, and the results that are obtained after introducing a detailed prompt. The results obtained in ChatGPT and Microsoft Copilot are mostly the same in both cases. Nevertheless, there are some differences among them. On the one hand, Tables 1 and 2 compare the results obtained after introducing the first prompt, in both the grammatical explanation and exercises for the two materials compared. ChatGPT provides a more organised and visual answer, including emoticons and tables that group the time and place preposition meanings with their corresponding examples. This form of presentation creates a positive impact on students by providing more organised and visual content. On the other hand, Microsoft Copilot delivers a more of a list answer, just giving a list of the prepositions and fewer examples than in *ChatGPT*, although this device includes more explanations and senses that these prepositions may have. The two devices include some exercises for practice with answers. Nonetheless, the exercises presented in *Microsoft Copilot* are presented in various forms, e.g. fill-in-the-gap, choose the correct option, and correct the mistake, while the exercises presented in *ChatGPT* are only fill-in-the-gap exercises, being less dynamic and more mechanical when completing them.

Table 1: Grammatical content provided by *ChatGPT* and *Microsoft Copilot* for prompt 1 "Act as if you were an English teacher in Spain and provide an explanation and some exercises for time and place prepositions "in, on, at" at an A2 level"

Grammatical content provided by ChatGPT	Grammatical content provided by Microsoft Copilot		
O Prepositions of Time	Time Prepositions		
Preposition Use Example	1. In		
in Months, years, centuries, long	Months: in January, in July		
periods in July, in 2022, in the morning	• Years: in 2025, in 1990		
on Days and dates on Monday,	• Seasons: in summer, in winter		
on 5th May, on my birthday			

at Clock time, holidays, short specific times at 7:00, at Christmas, at night

Examples:

- I was born in 2001.
- We have class on Wednesday.
- The movie starts at 9:30.

Prepositions of Place

Preposition Use Example
in Inside something (a room, a city,
a country) in the kitchen, in Madrid, in
Spain

on On a surface on the table, on the wall, on the floor

at A point or a specific place at the door, at school, at the station

Examples:

- The books are on the table.
- She lives in Barcelona.
- Let's meet at the bus stop.

- Parts of the day: in the morning, in the afternoon (but at night)
- 2. On
- Days: on Monday, on Christmas Day
- Dates: on May 29th, on my birthday
- Specific days: on New Year's Eve, on the weekend (in American English, at the weekend in British English)
- 3. At
- Specific times: at 3 o'clock, at noon
- Holidays: at Christmas, at Easter
- Night: at night

Place Prepositions

- 1. In
- Countries and cities: in Spain, in

Madrid

- Rooms and buildings: in the kitchen, in the office
- Enclosed spaces: in the car, in the park
- 2. On
- Surfaces: on the table, on the wall
- Transport: on the bus, on a plane
- Streets: on Main Street, on the road
- 3. At
- Specific locations: at the bus stop, at the door
- Events: at the party, at the concert
- Addresses: at 123 Main Street

Table 2: Exercises proposed by *ChatGPT* and *Microsoft Copilot* for prompt 1 "Act as if you were an English teacher in Spain and provide an explanation and some exercises for time and place prepositions "in, on, at" at an A2 level"

Exercises proposed by ChatGPT	Exercises proposed by Microsoft Copilot		
* Exercise 3: Complete the Sentences	Exercise 3: Correct the sentences		
Use in, on, or at: 1. I live a small village the north of Spain. 2. Let's meet 6:00 Friday.	 He is at the bus. We will meet in 5 PM. She lives on Spain. The book is in the table. They are going to the party in 		
3. The picture is the wall the living room.4. He was born 1999	Saturday.		
October. Sample Answers: 1. in/in 2. at / on 3. on / in 4. in / in	Answers: Exercise 3 1. He is on the bus. 2. We will meet at 5 PM. 3. She lives in Spain. 4. The book is on the table. 5. They are going to the party on Saturday.		

Discussing the information provided after submitting the second prompt, it can be noticed that the responses given are similar to the ones given in the earlier prompt. As it can be seen in Tables 3 and 4, *Microsoft Copilot* delivers a more complete theoretical answer, although it is less organised than the one provided by *ChatGPT*. In both instances, the exercises provided are simple and easy to

understand and complete. *ChatGPT* delivers a larger number of practices, but in both cases, the format of the practice offered follows the traditional fill-in-the-gap and multiple-choice exercises. Nevertheless, as these are AI tools, the person delivering the prompt can demand more specific information or a wider range of exercises. After comparing the two prompts introduced, I have concluded that the necessity of considering both the perspective of the teacher and the student is not necessary, as the second one, the student prompt, does not present any additional information to the one given from the teacher's point of view.

Table 3: Grammatical content provided by *ChatGPT* and *Microsoft Copilot* for prompt 2 "I am an English A2 student who needs to improve the time and place prepositions "in, on, at". Give me a detailed explanation with examples and exercises"

Grammatical content provided by ChatGPT			matical content provided by soft Copilot	
PART 1: PREPOSITIONS OF TIME (When?) Preposition Used for Examples			Prepositions of Time In	
in	Months, years, centuries, long periods	in January, in 2020, in the morning	•	Months: in January, in March Years: in 2025, in 1990 Centuries: in the 21st century
on	Specific days, dates	on Monday, on May 5th, on Christmas Day	Exam	Long periods: in the morning, in the summer ples:
at	Specific times, holiday periods (without "day"), nigh	at 5pm, at Christmas, at t night	•	I was born in July. She graduated in 2010. We will travel in the summer.
	oles: as born in July. e meeting is on Frida	ıy.	On •	Days : on Monday, on Christmas Day

Let's meet at 6 o'clock.
She always goes to church at Christmas.
Examples:

The meeting is on Friday.
He arrived on June 1st.

At

Specific times: at 5 PM, at noon
Holidays: at Christmas, at Easter

Specific moments: at the moment, at sunrise
Examples:

The train leaves at 8 AM.
We will meet at noon.

Table 4: Exercises proposed by *ChatGPT* and *Microsoft Copilot* for prompt 2 "I am an English A2 student who needs to improve the time and place prepositions "in, on, at". Give me a detailed explanation with examples and exercises"

Exercises proposed by ChatGPT	Exercises proposed by Microsoft Copilot		
PRACTICE EXERCISES	Exercises		
• A. Choose the correct preposition (in,	Fill in the blanks with the correct		
on, at):	preposition (in, on, at):		
1. I have a meeting Monday.	1. She was born 1995.		
2. The books are the shelf.	2. The meeting is Monday.		
3. He was born 1999.	3. We will meet 3 PM.		
4. We usually eat dinner 7 p.m.	4. He lives Paris.		

5. They live France.	5. The book is the shelf.
6. My birthday is June.	6. She is waiting the bus stop.
7. She's the office right now.	Answers:
8. The picture is the wall.	1. in 1995
9. The concert is Saturday night.	2. on Monday
I like walking the morning.	3. at 3 PM
✓ ANSWER KEY	4. in Paris
A:	5. on the shelf
1. on	6. at the bus stop
2. on	
3. in	
4. at	
5. in	
6. in	
7. in	
8. on	
9. on	
10. in	

Although the two chatbots presented seem to provide accurate information on time and place prepositions, as I have explained before, the information provided by these chatbots comes from a compilation of different internet sources. Because of this, making use of an AI machine is not fully reliable and other materials, for instance, corpora or grammatical websites, would be a more reliable source of obtaining information for teaching and learning English prepositions.

6. CONCLUSION

The goal of this dissertation has been to provide an analysis on the importance of English prepositions, their meanings, and their uses. As Evans and Tyler (2003) explain, prepositions are a complex category that is worth studying. Additionally, I have studied and understood how often the prepositions "in," "on," and "at" appear in speech, and the teaching materials that may be followed when teaching English as a foreign language.

The four research questions proposed have been carefully created considering the teaching materials that are currently being used in EFL classes, as well as exploring other materials that are proposed as new possibilities for EFL students and teachers. The first research question proves that after conducting a research on the Corpus of Contemporary American English (COCA), we can easily obtain the frequency of use and context of a preposition. The second and third research dealt with the different materials for teaching prepositions. Agreeing with Llopis-García (2024), EFL textbooks are not a complete enough tool for teaching prepositions, and it would be a good idea to complement them with the creation of new teaching materials that are based on applied cognitive linguistics. Additionally, the use of other resources, such as websites or corpora, would be an interesting alternative to traditional teaching materials. Lastly, the fourth research question has addressed the emergence topic of Artificial Intelligence (AI), showing that we cannot fully rely on it, as most of the sources are a compilation of already existing internet sources, making it impossible to know whether the information provided is correct and accurate.

Even though a case study for proving if the alternative teaching materials proposed are effective within EFL students would be convenient. The study conducted in this dissertation presents the possibility of new forms of teaching the uses and meanings of prepositions in a non-traditional structure. Additionally, this dissertation proposes multiple materials for teaching prepositions to EFL students, which could be taken as a reference for a future case study on learning prepositions.

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