Revue SCIENCES HumaineS n°45, Juin2016, Vol A, pp05-20

Applying the Semantics of Spatial Prepositions and Error Correction to Teach the Spatial Prepositions "*In*" and "*On*"

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Abstract:

Most teachers of English as a foreign language agree that a great number of learners use spatial prepositions inadequately and, despite the different techniques used in teaching them, most learners still consider learning the use of these prepositions one of the most problematic issues. The reason could be the various and close meanings and uses of each spatial preposition. Throughout this article, we will introduce the notion of the semantics of spatial prepositions (an organised and structured presentation of prepositions suggested by Cognitive Grammar), its importance and the semantics of both spatial prepositions *in* and *on*, in addition to an overview of the different types of error correction that can be used in the Grammar class. The results presented in this paper will show whether using error correction, presenting the semantics of spatial prepositions or using both techniques in combination would help teachers and students at the Department of English at the University of Constantine 1 in teaching and learning the spatial prepositions *in* and*on*

ملخص:

يتفق معظم أساتذة اللغة الإنجليزية كلغة أجنبية على أن عددا كبيرا من الطلاب يستخدمون حروف الجر المكانية بطريقة غير ملائمة ،كما يعتبر معظم المتعلّمين أنّ تعلّم استخدام هذا النوع من حروف الجر من أكثر القضايا تعقيدا بالرغم من التقنيات المختلفة التي يستخدمها الأساتذة في تعليمها . ويرجع السّبب إلى المعاني و الاستخدامات المختلفة لكل حرف جر مكاني. سوف نقدم في هذه المقالة فكرة دلالات حروف الجر المكانية (عرض تنظيمي و منظم لدلالية حروف الجر التي اقترحتها قواعد اللغة المعرفية) ،أهميتها ودلالات كل من حرفي الجر المكانيين في و على ،بالإضافة إلى لمحة عامة عن أنواع مختلفة من تصحيحا لأخطاء التي يمكن استخدامها في صف قواعد اللغة. نتائج البحث المقدمة تبيّن ما إذا كان استخدام تصحيح الأخطاء ، او تقديم دلالات حروف الجر المكانية أو استخدام كلتا التقنيتين معا من شأنه أن يساعد الأساتذة و الطلاب في قسم اللغة الإنجليزية في جامعة قسنطينة 1 على تعليم وتعلم حرفي الجر المكانيين في وعلى.

Introduction :

Spatial prepositions have always been a problematic area for teachers and learners of English as a second/foreign language because of the difficulty they face in teaching/acquiring their uses. The problematic use of spatial prepositions appears through the number and frequency of errors made when using them. This difficulty is caused by three major reasons: considering prepositions,

traditionally, as functional meaningless words; the variety of uses each spatial preposition has; and the close uses of different spatial prepositions. According to Cognitive Linguistics, dealing with spatial prepositions as meaningful words and structuring their different meanings in an organised way, which is the main interest of the semantics of spatial prepositions, would change the methods of approaching this type ofprepositions.

This article sheds light on the characteristics and importance of the semantics of spatial prepositions, the semantics of both spatial prepositions *in* and *on*, the importance of error correction, and the different types of error correction in the Grammar class. A major part of this paper will focus on the study aiming at investigating the most effective method(s) to teach the spatial prepositions *in* and *on*; semantics of spatial prepositions, error correction or both. The analysis of this study will cover, as well, the types of errors (omission, word formation, substitution, and addition) made by the students when using each of these two spatialprepositions.

1. The Semantics of SpatialPrepositions

The semantics of spatial prepositions is a new way to approach spatial prepositions as words that can have meanings. This notion is introduced by cognitivegrammarians.

1.1. Characteristics of the Semantics of SpatialPrepositions

The semantics of spatial prepositions is based on the cognitive view of semantics. According to Tyler and Evans (2003), meaning in cognitive semantics has a *conceptual structure*. Meaning does not merely represent the real world, as suggested by traditional semantics, but it is also related to what people have in their minds concerning that word. Langacker (2008) insists that the conceptual nature of meaning is formed in people's minds through the experiences they have. In other words, people construct meanings after they go through several types of experiences that result from contact with the real world and the different aspects of life; physical, interactive, cultural and social. These conceptual meanings will be developed and refined consistently according to the experiences people will subsequentlyface.

Accordingly, Boers and Demecheleer (1998) explain that the differences of using spatial prepositions in different languages are due to perceiving the world differently because of cultural differences and differences of experiences though people share the same physical world. For example, English has four words to describe the position of lower than (under, below, underneath, beneath) but in Arabic, there is only one word to describe this position (Tahta). Even historically, close cultures have differences in describing the same scene (Boers &Demecheleer 1998). As an example, when a scene described in English by saying "the woman walks ***in*** the rain", it is said in French, "la femme marche***sous*** la pluie" not *"la femme marche***dans**lapluie.

Semantics in Cognitive Linguistics assumes that all words in language are meaningful but in degrees (Langacker 2008). Spatial prepositions are consideredaccordingly meaningful words. According to Pütz (2007) and Tyler (2007), spatial prepositions are polysemouswords and the meanings of each spatial preposition are related to aprototypical meaning. To be said differently, cognitive linguists believe that the meanings of each spatial preposition are distinct but related all to one core meaning with different degrees. Hence, the meanings of each spatial preposition extend from the main centralmeaning.

The semantics of spatial prepositions is said to consist of two complementary components, geometrical and functional (Lindstromberg 2010). These components refer to the relations between the Landmark, which is subject of the spatial preposition (also called Figure, Subject), and the Trajector, which is the object of the spatial preposition (also called Ground, Reference). Talmy (2003) defines the geometrical component as the spatial visual matters of representing a physical scene, such as whether the trajector and the landmark are close, far, in contact, one higher than the other, or one in front of another. Lindstromberg (2010) identifies the functional component as the role assigned to the use of a specific spatial preposition. These functions include concepts such as containment, support, existence and/or absence of contact, goal and path (Tyler & Evans, 2003). Each spatial preposition's core meaning, then, has a geometrical meaning and a functional meaning; the absence or existence of these meanings creates the different meanings of that spatialpreposition.

1.2. Importance of the Semantics of SpatialPrepositions

Using the semantics of spatial prepositions would help students understand the effect of the cross-cultural differences when using spatial prepositions. Therefore, students would start practising to avoid negative transfer and to avoid using the spatial prepositions the same way it is used in their mothertongue.

Another advantage of using the semantics of spatial prepositions resides in solving the problems of the number of different meanings related to each spatial preposition and the close meanings and uses of the two different spatial prepositions. According to Tyler and Evans (2003), the meanings of each spatial preposition can be organised in a principled polysemy when dealing with them as polysemous words. When presenting spatial prepositions as polysemous words whose different meanings are centred around one main meaning, the different unrelated meanings will be organised and structured. Moreover, presenting the semantics of spatial prepositions as having functional and geometrical components of meaning may help in identifying the cases where using two close spatial prepositions can be interchangeable and where theycannot.

1.3. The Semantics of the Spatial Prepositions *"In"* and *"On"*

Using the spatial prepositions *in* and *on* is sometimes confusing because their meanings sometimes overlap. For this reason, the meanings of each of these spatial prepositions should be presented in addition to the differences between using both ofthem.

1.3.1 The Semantics of the Spatial Prepositions *"In"*

The semantics of the spatial preposition *in* is composed of the main meaning and the distinct spatialmeanings.

Geometrically, the main physical meaning of *in* entails a relation of enclosure (Garrod et al., 1999). If the trajector is in the landmark, it is then included in and surrounded by the interior or all of the landmark. Consequently, the landmark is perceived by the speaker as a three dimensional entity (Herskovits, 1985), or as a bound landmark (Tyler & Evans, 2003), which is one that has an interior, an exterior and a boundary. Luraghi (2003) states that when the trajector is enclosed by the landmark, the landmark is perceived as a container (p. 23); hence, the relationship between the trajector and the landmark is one of containment. According to Garrod

et al. (1999), the relationship expressed by the spatial preposition *in* means that the container controls the movement of the containment. The use of the spatial preposition *in* has the function of linking the movement of the container and the content; if the container moves, the content will move with it. Some types of enclosure are not usually concrete but, sometimes, it is understood from the context as the enclosure of atmospheric conditions in "The flag flapped in the wind" (Tyler & Evans, 2003:185).

The spatial preposition *in* can have different distinct spatial meanings. In a sentence like '*The flowers are in the vase*', the trajector (the flowers) is not totally contained in the landmark (the vase) but just a part of it (their lower part). Tyler and Evans (2003) explain that the side function of the meaning of the spatial preposition *in* still exists because when moving the vase, the flowers move with it and because the vase is also limiting the placement of the flowers. Therefore, it is appropriate to use the spatial preposition *in* to profile this relationship. However, when there is a partial enclosure between the landmark and the trajector and the functional element is not satisfied, the spatial preposition *in* cannot be used. This point of view is supported by Jackendoff (2002: 355) when he describes a plane whose wing is only partially surrounded by clouds, where it cannot be said that "*The plane is in the clouds*" because there is no function of *in* shown by the landmark and thetrajector.

Another type of enclosure is what Garrod, et al. (1999: 172) name *scattered enclosure* (also named "multiplex mass transformation" (Lakoff ,1987: 428)). *Scattered enclosure* refers to the situation where the trajector is surrounded by many members of the sameentity(Garrod et al.: 1999). The trajector is thus conceptualised as one entity occupying one bounded place. In the example '*The child is in the crowd*', the trajector (*the child*) is surrounded by the landmark (*the crowd*, which is the result of gathering many people as one entity). In the example "The cow munched grass in the field" (Tyler & Evans 2003: 184), since the landmark is a surface with an interior (the part of the field), an exterior (the part out of the field) and boundaries that separate the two latter parts (the road and/or the gate), it can be considered a bounded landmark. Tyler and Evans (2003: 184) named this type of bounded landmark *non-canonical*. This type of landmarks is a container because it is bounded and, sometimes, it controls the movement of trajectors inside it. Consequently, areas, countries, and seas are considered bounded landmarks. The landmark is often omitted when it is understood from the context as in '*The workers stayed in for the strike*'; it is understood that *the workers* (the trajector) were inside the workplace (thelandmark).

1.3.2. Semantics of the Spatial Prepositions"*On*"

The semantics of the spatial preposition *on* is composed of the main meaning, whichhas different forms and diversity of uses, and the spatial distinctmeanings.

The basic meaning of the spatial preposition *on* consists of geometrical and functional components. At the geometrical level, the spatial preposition *on* is used to express a relationship where a surface of the trajector or a point(s) of it has direct contact or contiguity with a surface of the landmark (Garrod et al., 1999). This means that the primary meaning of *on* refers to a direct contact between the trajector and the landmark at a point or more of the trajector. According to Tyler and Evans (2003), the landmark is perceived as a two dimensional entity represented through

the surface of landmark. Garrod et al. (1999) state that there is an important function of support when the trajector is in contact with the landmark. For example, if '*The book is on the table*', the landmark (*the table*) supports the trajector (*the book*) and prevents any possibility of falling caused by gravity. The diversity in use of the spatial preposition *on* would occur when there is a change of the physical arrangement or if the landmark is a vertical surface. Lindstromberg (2010: 52) suggests the example "the mirror on the wall", "the security light on the outside/inside of the house" and "chewing-gum on the bottom of the table". In these three examples, there is a contact and support between the trajectors and the landmarks; in the first example, the geometric description is vertical rather than horizontal; in the second example, it is an outside or inside vertical surface and in the third example, the landmark is a bottomsurface.

There are occasionally spatial distinct meanings, in the absence of one of the characteristicsofthesemanticsofthespatialpreposition *on*.Insuchacase,thespatial prepositon*on* can be used even if the notion of support is not considered (Herskovits, 1985). In the example '*There is a point on the line*', the landmark (*the line*) does not support the trajector (*the point*) but the trajector and the landmark are merely in contact. Lindstromberg (2010: 52) uses the example "Both of *these campgrounds* are right *on the ocean*" to illustrate that it is appropriate to use the spatial preposition *on* since there is still some contact between the trajector and the landmark though there is no support function between the trajector (*these campgrounds*) and the landmark (*the ocean*) and an indirect contact at only one end. Sometimes, the absence of contact does not exclude the use of the spatial preposition *on*, especially if the function of support still exists. For example, in a situation where there is a dictionary on another book, and both are supported by a table, it is appropriate to say '*The dictionary is on the table*' though the trajector is not in direct contact with the landmark and separated by another book, both the dictionary and the book are supported by the landmark (*the table*). In addition, there would be a situation where contact happens only at one end of the landmark (Lindstromberg, 2010). For example, in the sentence '*The ball is on the string*', the trajector (*the ball*) is in contact with the end of the landmark (*the string*), which is neither a surface nor two-dimensional, and the landmark keeps the ball from falling; therefore, it is appropriate to use the spatial prepositon*on*.

Another distinct meaning is used when there is no support between the trajector and the landmark, and the contact found between them is either unreal (Herskovits, 1985) or a reflection and an illusion (Lindstromberg, 2010). The first case can be found in the phrase "wrinkles on his forehead" (Herskovits, 1985: 351). There is no way for the landmark (*forehead*) to support the trajector (*wrinkles*), and the contact between the two is not real, but it resembles contact since it is a part of the surface skin of the forehead. The second situation appears in the phrase "a shadow on the floor" where the contact is a matter of illusion because the trajector is a reflection of the real object and it is not a real contact (Herskovits, 1986). The situation described often accepts more than one preposition, *in* or *on*, depending on the intension of the speaker and how the landmark is perceived. When the wrinkles are not deep in the skin but just superficial, *on* is used as in "wrinkles on his forehead"; however, when the wrinkles are deep, *in* is used as in "wrinkles in his

forehead". The sentence 'There is oil on the pan' refers to the case where oil is just on the surface of the pan, but the sentence 'there is oil in the pan' means that oil occupies a volume in thepan.

2. ErrorCorrection

Despite the debate that occurred about its usefulness for many years, it has been acknowledged that error correction is beneficial to foreign language learners regardless the techniques it is appliedthrough.

2.1. Importance of ErrorCorrection

Many studies favour using error correction in the classroom to enhance language learning and mainly language accuracy. Ferris (2003) emphasises the effectiveness of feedback, in general, in helping learners learn from others' responses, strengthen learning and promote it. Provided with feedback, whether responding or error correcting, learners are likely to correct their wrong knowledge and to reinforce the corrected one. Error correction helps in making learners' interlanguage resemble the target language (Selinker, 1972). Errors are a window to the points of language that have not been learnt well, and correcting them would help emphasise those weak points and make learners language look like the targetlanguage.

The learners' attitude towards error correction is behind many researchers' belief in its usefulness. Lasagabaster and Sieria (2005) and Penston (2005) suggest that most second/foreign language learners wait for error correction as they prefer their mistakes to be corrected. Brown (2007) explains that errors must be highlighted since not drawing the learners' attention to them will cause fossilisation. When learners' wrong use of the language is not corrected, learners will build wrong lasting knowledge about that point of language and will be related to itsuse.

Another reason for using error correction is enhancing the learning process. Noticing is an important factor in the process of learning that can be enhanced through error correction (Ellis, 1998). When learners' errors are corrected, learners notice the difference between their version of that point of language and the correct one; thus, they become aware of it. According to Brown (2007), after learning a feature and then noticing its wrong use and its correct form, learners can use this feature correctly in communicationeasily.

2.2. Types of ErrorCorrection

Many types of error correction can be used in a Grammar class depending on the elements corrected (selective or comprehensive) and the explicitness of the correction (direct orindirect).

_ *Selective VersusComprehensive:*

There are two types of error correction that teachers can opt for depending on their aim and their classroom conditions, selective and comprehensive. Truscott (2001) defines selective error correction as the technique of selecting the errors to be corrected, andcomprehensive error correction as correcting all the errors produced in learners' writings. Some teachers are in favour of selective error correction because it is more encouraging and focused for learners than comprehensive error correction, which is time consuming for them. However, there are some other teachers who think that all errors should be corrected as soon as they happen to avoid having themrepeated.

_ *Direct VersusIndirect:*

The second factor that identifies the type of error correction is the level of explicitness when identifying and correcting the learners' errors. Error correction can vary in a continuum of explicitness from totally direct to totally indirect. Savage, Bitterlin and Price (2010) define overt error correction as the teacher clearly giving the correct form of the error and usually the learners are required to repeat it, while indirect error correction is seen as a technique that leads the learners to correct the errors themselves. In direct correction, the teacher clearly identifies the error and provides its correction; in indirect correction, the learners are directed to identify and correct their errors themselves. Though the teacher's correction is considered very important (Hedge, 2000), correcting the errors by the learners whether correcting each other's errors or correcting their own errors is believed to be of great help for them (Ortega, 2009).

3. Students' Use of the Spatial Prepositions *"In"* and *"On"*

Students' use of spatial prepositions has been considered problematic in their productions. The spatial prepositions *in* and *on* have, particularly, been noticed by teachers of Grammar to be the most problematicones.

3.1. Background of theStudy

Teachers and researchers agree that using spatial prepositions adequately is one of the most difficult areas for learners of English as a foreign language. Researchers suggest several reasons behind this difficulty. These reasons are: the differences of using spatial prepositions in different languages caused by cross-cultural dissimilarities, the variety of meanings that each preposition has, and the overlapping of the use of different spatial prepositions (Boers &Demecheleer, 1998; Celce-Murcia & Larsen-Freeman, 1998). Through our experience as teachers of Grammar at the Department of Letters and English at the University of Constantine 1, we have noticed that the majority of students of English as a foreign language do face the previous problems when using the spatial prepositions *in* and *on* in writing. This situation has led us to wonder about what the possible way(s) would be to help students use the spatial prepositions *in* and *on* adequately inwriting.

We aim in this paper at helping students of English as a foreign language at the University of Constantine 1 use the spatial prepositions *in* and *on* correctly and be aware of the differences when using these prepositions in Arabic and in English. Moreover, we aim to help learners make the difference between using *in* and using*on*.

To achieve our aims, we hypothesise that learners may need to be alerted to their errors when using these spatial prepositions using error correction methods. Moreover, they would better approach these spatial prepositions in a way that presents and organises their different meanings and the relationship between using both spatialprepositions.

3.2. Spatial DescriptiveParagraph

The sample of the study is composed of 119 second year students of English as a foreign language at the University of Constantine 1. The sample was divided into four groups, one control and three experimental groups. The control group is composed of 27 participants, the first experimental group is composed of 30 participants, the second experimental group consists of 28 participants and the third

experimental group is made up of 34 participants. The control group and the three experimental groups had a pre-test and a post-test; in each of these tests, every participant of the four groups was required to write two paragraphs to describe two pictures, one of a room and the other showing directions from one point to another in a town. Before writing, students of the four groups were provided with the vocabulary needed and were allowed to ask for any clarification. The time allocated for each of the two tests was 90 minutes. Students' writings were corrected by the researcher and the errors related to the wrong use of the spatial prepositions *in* and *on* werecircled.

3.3. Description of theInstruction

After having the pre-test, the control group has received no treatment related to the current study. The three experimental groups underwent three different treatments: The first experimental group received the error correction treatment where the participants' errors concerning using the spatial prepositions *in* and *on* were corrected using different types of error correction; the second experimental group received a detailed and organised explanation of the semantics of the spatial prepositions *in* and *on*. The participants of the third experimental group received the semantics of the spatial prepositions *in* and *on* with reference to the students' errors made in the pre-test, then, different types of error correction were applied based on the knowledge of the semantics of the spatial prepositions *in* and *on*. A post- test was given at the end of each kind treatment and to the controlgroup.

The results were analysed based on the number of errors made when using both spatial prepositions, *in* and *on* and on the type of errors whether omission, word formation, substitutions ordeletion.

3.4. Results of theStudy

The results obtained after analysing the students' production in the pre-test revealed the followingresults:

3.4.1. Using the Spatial Preposition "*In*" in thePre-test

Types oferrors		**CG**	**Exp.G1**	**Exp.G2**	**Exp.G3**
Omission					1
Word formation	Spelling				
	Form				
Substitution	at	4	4	2	4
	on	3	3	2	8
	into	1			
	nextto			1	
	of				1
Additionerror		2		1	6
Total		**10**	**7**	**6**	**20**
Average		***0.37***	***0.23***	***0.22***	***0.59***

Table 1: Results of the Use of Spatial Preposition "*In*" in thePre-test

It is worth noticing that the majority of prepositions that students in the four groups used to replace the spatial preposition *in* are *at* –such as ***at*** *the corner of the room, there is a waste basket; the carpet is* ***at*** *the middle of the room- on* –as in ***on*** *the wall of the room, there is a window*; ***on*** *the middle of the room, there is a carpet*- and *into –I have a special order when organizing the elements* ***into*** *my room*. The spatial preposition *in* is sometimes wrongly added by students where it should not, such as *you entered* ***in*** *my room.* Other examples of substitution errors concerning the use of the spatial preposition *in* are *the window* ***next to*** *the wall* (used in the second experimental group) and *I am a stranger* ***of*** *this town* (used in the second experimentalgroup).

Comparing the average of errors of each group when using the spatial preposition *in*reveals that the average of errors in the third experimental group is the highest, with a rate of0.59 error/student. The average in the control group (0.37 error/student) is higher than both averages of the first experimental group (0.23 error/student) and the second experimental group (0.22error/student).

The reason behind the confusion between using the spatial preposition *in* and other prepositions could be that students could not perceive certain landmarks in some situations as enclosed space, such as corners and flat spaces (wall, middle of the room, desks).

Consequently, learners would think that the corner of the room is the same like cornersofthestreetand,forthisreason,theyuse*at/onthecorner*instead.Ontheotherhand,learnersdo notconsiderthemiddleoftheroomasaboundedlandmarkbecausetheyfocusonlyonthesurface but not on the bounds and exterior (*non-canonical landmark* (Tyler andEvans2003)). Moreover, learners would mix between enclosure and containment expressedbythespatial preposition *in*, and movement from the outside to the enclosed place expressedby*into* becauseofthecommonpointofenclosure.Using*nextto*insteadof*in*wouldbecausedby focusing only on some part of the landmark (a part of the wall) instead of considering thatthetrajector (window) belongs toit.

3.4.2. Using the Spatial Preposition "*On*" in thePre-test

The analysis of the pre-test illustrates that when using the spatial preposition *on*, students of the control group and the experimental groups make the errors presented in the followingtable:

Types oferrors		CG	Exp.G 1	Exp.G 2	Exp.G 3
Omissio		2	3	5	12
Word Formatio n	Spelling				
	Form				
Substitution	at	8	6	4	7
	in	29	50	34	47
	above	14	24	20	22
	over	4	1	2	1
	on top of	3	3	5	1
	inside	2			2
	upon	2			
	upto		2		
	between	1			2
	under	1		2	
	beside	1			
	nextto	1			
	after		1		
	inface		1		
	with		1		2
	to			1	1
	below				4
	next				1
	behind				1
	up	1	1	2	
Addition			1	1	
Total		**69**	**94**	**76**	**103**
Average		***2.56***	***3.13***	***2.71***	***3.03***

Table 2: Results of the Use of Spatial Preposition "*On*" in thePre-test

When comparing the performance of students of the groups concerning the use of the spatial preposition *on*, it is found that the rate of errors in the first experimental group is 3.13 error/student, and that of the students in the third experimental group is 3.03 error/student. These close averages are higher than those of the control group and the second experimental group, which are 2.71 and 2.56respectively.

One shared error when using the spatial preposition *on* is the omission error in which students of the four groups used sentences, such as **Ø** *the first shelve, there are loud speakers;* **Ø** *the second shelve, there are books* without using *on* before *the first shelve, the second shelve.* The addition error is the one where students produced

a sentence such as *when you enter* ***on*** *my room.* The common spatial prepositions used in the four groups to substitute for the use of the spatial preposition *on* are: *in* (***in*** *the middle shelve, I put books; there is a wonderful carpet* ***in*** *the floor), above* (*there is a nightstand* ***above*** *the nightlight), at* (*there is a carpet ,* ***at*** *the floor)*, *on top of (the night stand is* ***on top of*** *the nightstand), with (****with*** *my bed, I have my small pillow), up to* and *up (****up to*** *the first shelve, there are books and* ***up*** *the third one, there are boxes).*In addition to these common errors, there are other errors made only by students in the control group, such as ***upon*** *the nightstand, there is the nightlight; there are many boxes,* ***under*** *the last shelve;* ***beside*** *the other shelve, there are encyclopaedias; there are two loud speakers,* ***inside*** *the first shelve.* Moreover, other errors are made only by students in the first experimental group, such as ***after*** *my nightstand, there is my nightlight; you see my big bed and my pillow* ***in face*** *it.* Another error is found only in the second experimental group, ***to*** *the desk, there are decoration lights.* One last error is made only by students in the third experimental group, which is *you can see my pillow* ***behind*** *mybed*.

The reason behind students using the spatial preposition *in* instead of using *on* in all the groups could be the influence of the mother tongue where it is acceptable to use the spatial preposition '*fi*', which is equal to the English preposition *in*, when referring to shelves, or the influence of dialects when referring tofloors.

Another reason could be that students do not know the difference between *on the corner of a street* and replace it by using *in the corner of*, which refers only to corners of an enclosed space. Students also use *on top of* when they should use *on* because they may not know that *on the top of* is used when the landmark is higher thanlarger.

The other point that would be the cause of students using *over* or *above* to replace *in* is that they focus only on the common characteristic of using the three prepositions, which is the meaning of "higher than", but ignore the level of height related only to both prepositions *over* and*above*.Inadditiontothat,thereisthefunctionofinfluenceandrelation,expressedby *over*, and the characteristic of no contact, expressed by *above*, which make the three prepositions different in use in mostcontexts.

Using the preposition *with* to replace the spatial preposition *on* is due to replacing a specific preposition by a general one (*with*), which refers to the trajector (the pillow) as accompanying the landmark (the bed) in all thecases.

3.4.3. Using the Spatial Preposition "*In*" in thePost-test

After analysing the students' productions in the post-test, the errors found related to the use of the spatial preposition *in* are presented in the followingtable:

Types oferrors		CG	Exp.G1	Exp.G2	Exp.G3
Omission					
Word Formation	Spelling				
	Form				
Substitution	at	2	5	1	
	on	11	3	6	3
	from	1			1
	under	1			
	to		1		
	among		1		
	into			2	1
Addition		3	1		2
Total		**18**	**11**	**9**	**7**
Average		***0.67***	***0.37***	***0.32***	***0.21***

Table 3: Results of the Use of Spatial Preposition "*In*" in thePost-test

When comparing the results of using the spatial preposition *in* in the post-test, it can be noticed that the average of errors per student is the highest in the control group, with 0.67 error/student, while the lowest is that of the third experimental group (0.21 error/student). The average of errors in the first experimental group is slightly higher than that of the second experimental group, which are 0.37 error/student and 0.32error/studentrespectively.

In the four groups, there are students who are confused when dealing with the different notions related to corners depending on the context. For this reason, the majority of the errors made are caused by using the spatial preposition *on* where the spatial preposition *in* should have been used. However, students in the third experimental group seem to be more aware about the use of the spatial preposition *in* compared to the othergroups.

3.4.4. Analysing the Use of the Spatial Preposition "*On*" in thePost-test

The analysis of the post-test shows that when using the spatial preposition *on*, students of the four groups make the errors presented in the followingtable:

Types oferrors		CG	Exp.G 1	Exp.G 2	Exp.G 3
Omissio		1			1
Word Formation	Spelling				
	Form				
Substitution	in	28	23	12	12
	aboveof		1		
	above	14	16	5	
	over	4	11	2	15
	on topof	4	3	4	
	inside	4		1	
	at	4	5	3	
	between	1			
	upon	1		2	
	to	1	1	2	
	up		1	2	
	next to		1		2
	in frontof			1	
	into				2
Addition					
Total		62	62	34	32
Average		*2.3*	*2.07*	*1.21*	*0.94*

Table 4: Results of the Use of Spatial Preposition "*On*" in thePost-test

The averages of errors made in the four groups when using the spatial preposition *on* are quite different. The highest average is found in the control group with 2.30 error/student, while the lowest average of errors is that of the third experimental group with 0.94 error/student. The first experimental group and the second experimental group came second and third with 2.07 and 1.21error/studentrespectively.

When comparing the results of the four groups after the treatment, it appears that many students in the four groups cannot use the spatial preposition *on* correctly. The four groups share the substitution of the spatial preposition *on* by the following prepositions: *in*, *over*, *on top of*, *and above*. Hence, even after the treatments, some students of the three experimental groups still face problems concerning the use of the spatial preposition *on*. That would be caused by fossilisation or internalisation of the wrong form but with a significant difference between the four groups'results.

3.5. Comparison between Students' Performance in the Pre-test and Post-test

Comparison of the performance of the control group students, when using the spatial preposition *in,* shows that their performance has not improved while the number of students' errors has increased. As far as the use of the spatial preposition *in* is concerned, the number of errors in the post-test has increase with 8 errors in

comparison with the pre-test. Thenumberof errors when using the spatial preposition *on* are high in both the pre-test and the post-test; however, it is slightly higher in the pre-test than in the post-test with 7 errors, which illustrates a slightimprovement.

Students in the first experimental group were exposed to all types of error correction. Though students' attention was drawn to the errors they made in the pre-test, and different techniques were applied to deal with those errors, errors could still be found in the post-test. When comparing the performance of students in the first experimental group when using the spatial preposition *in* and *on*, it can be noticed that the number of errors found when using the spatial preposition *in* is higher in the post-test than in the pre-test as students made 4 more errors when using the latter in the post-test. The number of errors when using the spatial preposition *on* is higher in the pre-test than in the post-test with a remarkable difference of 32 errors; the number of errors made in the post-test is not significantly remarkable compared to the number of errors made in the control group. Hence, the hypothesis of using error correction as a method to teach the spatial prepositions *in* and *on* is notconfirmed.

Students of the second experimental group, who were subjected to an explanation of the semantics of spatial prepositions *in* and *on* made 3 more errors in the post-test than in pre-test when using the spatial preposition *in*. However, students' errors related to the use of the spatial preposition *on* decreased in the post-test to less than half of the errors made in the pre- test which reveals a significant improvement in the use of the spatial preposition *on*. Consequently, the hypothesis of the usefulness of the semantics of spatial prepositions on their teaching is partially confirmed because it is significantly confirmed when teaching the spatial preposition *on* but not confirmed when teaching the spatial preposition*in*.

Students in the third experimental group made errors after they received a treatment that consists of a combination of error correction and presentation and explanation of the meanings of each spatial preposition with reference to the relationship between these meanings and the meanings of other close spatial prepositions. It is noticeable that the students' performance concerning the use of the spatial preposition *in* improved; there were 20 errors in the pre-test, and only 7 were made in the post-test. Concerning the use of the spatial preposition *on*, the number of students' errors in the post-test decreased to 32 errors after it was 103 errors in the pre-test, which means that the errors diminished by more than 2/3. Accordingly, the hypothesis of the efficiency of using the combination presenting the semantics of spatial prepositions and error correction as a method to teach both spatial prepositions *in* and on *is* stronglyconfirmed.

Conclusion

Presenting the semantics of the spatial prepositions *in* and *on* proves to be effective in helping learners organise their learning and use of these two spatial prepositions. However, it is more effective when it is combined with different error correction techniques that draw learners' attention to their errors when using the spatial prepositions *in* and *on*, and that provide explanations for why they should not make those errors. It is, therefore, recommended that the presentation of the spatial prepositions *in* and *on* should go hand in hand with error correctiontechniques.

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