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The Acquisition of Dative Alternation and Markedness in Second Language Learning

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Abstract: The aim of this study is to investigate English dative alternation in terms of markedness theory. In this regard, the markedness of two possible structures of dative alternation, [NP NP] vs. [NP PP], for- and to- dative verbs, and 12 native-origin and 6 nonnative-origin dative verbs are investigated among 50 university students whose L1 is Turkish and L2 is English. In order to collect data, a grammaticality judgement test and a picture-cued production test were used. The results revealed that [NP PP] structure is unmarked for Turkish learners of English. Furthermore, participants used the preposition to instead of for with for-dative vebs in prepositional dative structures in the production test.

Keywords: Markedness, Dative alternation, For and To dative verbs.

Introduction

Levin (1993) states that complex structures are demonstrated by the verbs and their arguments and due to the relationship between their arguments, verbs are quite popular in language research. Verbs have to be considered together with other elements in the sentences (Berk, 1999), since the grammaticality of a sentence is bound to its verb. In order to understand the relations expressed through these complex syntactic structures, it is noteworthy to study verbs requiring or

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allowing different structures. Which form is to be used requires the knowledge of these different structure's grammatical usage by the speakers of that language. Finding out this linguistic competence of speakers is an important issue in learning and teaching languages.

In second language learning UG plays a crucial role (Felix, 1988) and some researchers claim that UG serves in the same way for both L1 and L2 acquisition (White, 1989). Being able to identify the constraints of verbs in second language requires the knowledge of core and peripheral grammar, which constitute the marked and unmarked features of a language (White, 1989). Among these marked and unmarked features, second language learners have to acquire dative alternation which requires them to distinguish between alternating and non-alternating verbs in addition to verbs requiring to- and for-prepositional phrases.

The aim of this present study is to investigate L1 Turkish L2 English second language learners' acquisition of to- and for-dative structures in English. Since dative alternation is considered as a poverty-of-stimulus construction, meaning that second language learners have difficulty in acquiring this structure through input from the environment (Perpiñán & Montrul, 2006, Mazurkewich, 1984), it seems necessary to investigate the difficulty of structures for second language learners by determining which structures are marked and which are unmarked. Therefore, markedness in the following classes of dative alternation will be looked at in this study:

1. To-dative verbs allowing alternation

- Ali sent an e-mail to Ayşe.

- Ali sent Ayşe an e-mail.

2. For-dative verbs allowing alternation

- Ali bought a book for Ayşe.

- Ali bought Ayşe a book.

3. To-dative verbs obligatorily taking prepositional phrase complements

Zeybek (2018)

- Ali explained the problem to Ayşe.

4. For-dative verbs obligatorily taking prepositional phrase complements

- Ali captured a butterfly for Ayşe.

This article includes the following sections: the presentation of dative structures in English, markedness theory and dative structures, and previous studies conducted on dative alternation. Next, the present study is described, the findings are reported. Lastly, discussion and conclusion sections are presented.

Dative Structures in English

Datives in English have several alternations in which the direct object changes its position (Fotos & Ellis, 1991). As Wolfe-Quintero (1992b) states, English has two kinds of dative structures, namely, an Indirect Object Dative (IOD) structures having direct and indirect objects (NP PP) and a Double Object Dative (DOD) structures having double objects (NP NP). Prepositions to and for are involved in IOD structures and they are followed by a noun phrase (NP). In these kinds of structures, a recipient thematic role is assigned to the NP following the verb to, and a benefactive thematic role is assigned to the NP which follows the preposition for.

(1) Ayşe gave an apple to Ali. (NP PP) (IOD)

(2) Ayşe baked a cake for Ali. (NP PP) (lOD)

The DOD structures include two noun phrases in which the NP following the verb has the role of either recipient or benefactive. The patient role of the action is expressed by the second noun phrase (Wolfe- Quintero, l992b).

(3) Ayşe gave Ali an apple. (NP NP) (DOD)

(4) Ayşe baked Ali a cake. (NP NP) (DOD)

Mazurkewich and White (1984) presented a classification of verbs which allow alternation and which are non-alternating. As they indicated, verbs allowing alternation have two possible

prepositions in [NP PP] complements, to and for. These prepositions are used with non-alternating verbs as well. These both types of verbs are demonstrated in table 1.

Verbs which alternate *(native stems)*	
to	*for*
bring, give, grant, hand, lend, offer, owe, pass, pay, read, rent, sell, send, serve, sing, show, teach, tell, etc.	bake, build, buy, choose, cook, draw, find, get, knit, leave, make, paint, play, save, sew, etc.

Verbs which do not alternate		
Possession not involved *Only [NP PP] complements*	Latinate verbs *Only [NP PP] complements*	
	to	*for*
answer, drive, make, open, owe, paint, prove, solve, stir, wash, etc.	address, announce, communicate, demonstrate, donate, explain, report, recommend, return, suggest, transfer, etc.	construct, create, design, photocopy, select, etc.

Prior or inalienable possession *Only [NP NP] complements*
begrudge, charge, cost, deny, envy, excuse, fine, forgive, give, refuse, spare, whish, etc.

Table 1. Some alternating and non-alternating verbs (Mazurkewich and White, 1984)

As it can be seen from table 1 that some verb pairs have quite similar meaning such as give and donate, tell and explain, build and construct, buy and purchase. However, while one of these verb pairs allow alternation, the other verb class have only [NP PP] complements. This shows that many verbs in these contrasts allowing alternation have a native stem, as opposed to the many non-alternating verbs, observed as being originally Latinate (Green, 1974, Oehrle, 1976, Stowell, 1981). On the other hand, table also includes verbs, which have native origin, but do not allow alternation such as answer, drive, make, open, etc. It is expected that if native origin verbs are the ones allowing alternation, then these verbs should allow it as well. However, there are other constraints than this morphological one which governs this alternation (Mazurkewich and White, 1984).

Goldsmith (1980) states there are also semantic constraints governing dative alternation, and asserts that in double object structures the indirect object plays a crucial role, since its' being animate makes it the prospective possessor of the direct object. In this regard, "only verbs which present dative NP as the prospective possessor of the direct object will be compatible with the double object construction" (see 5a, b, c, d). Below the examples show that, in (5b) the prospective possessor of the direct object is the indirect object, but in (5d) it is ungrammatical.

(5) a. I owe ten dollars to Ayşe.

b. I owe Ayşe ten dollars.

c. I owe this example to Ayşe.

d.* I owe Ayşe this example.

This factor is also true for native origin verbs that take for as preposition and that do not allow dative alternation (see 6a and 6b).

(6) a. Ahmet solved the problem for Ayşe.

b. *Ahmet solved Ayşe the problem.

Even though Ayşe somewhat benefits from the activity stated in the example, she is not the prospective possessor of the direct object. This explains why double object constructions are not applicable in this example. In addition to Goldsmith (1980), the role of an indirect object as a possessor in double object constructions is also highlighted by Stowell (1981). According to him, this role of possessing is an additional role given for the indirect object, which has the role of goal in to-dative constructions and, the role of beneficiary in for-dative structures. In this sense, since both goal and beneficiary roles have the meaning of prospectiveness, Goldsmith (1980)'s term 'prospective' possessor is found to be unnecessary (Mazurkewich and White, 1984).

As seen in table 1, some verbs involve prior possession (e.g. charge, deny, excuse, forgive, give, refuse, whish, etc.) and they can be seen only in [NP NP] constructions, which inalienable possession can be involved as well (see 7a, b and 8a, b).

(7) a. This table costs Ayşe $100.

b. *This table costs $100 to Ayşe.

(8) a. This problem gave Ahmet a headache.

b.*This problem gave a headache to Ahmet.

In the above examples (7 and 8), the indirect objects are not real goals or recipients, and the sense of transfer cannot be seen as it is in alternating verbs. Therefore, dative alternation is found to be limited when more than one roles are assigned to the indirect object, one of which can be taken by a preposition. When only the possessor role exists, only double object construction is

possible (Mazurkewich and White, 1984). Seeing the complexity of these structures, the investigation of their acquisition in second language learning is quite important. Markedness is one of the aspects that they can be studied. Next section will define and discuss markedness and the markedness of dative structures.

Markedness

The development of a structure in a language is affected by markedness (Wolfe-Quintero, 1992b) and this development includes stages which are organized according to a markedness relationship (Markuzewich, 1984, Wolfe-Quintero, 1992b). As Wolfe-Quintero (1992b) suggests, markedness is approached through four different configurations, namely productivity, universal grammar, learnability and typological criteria. Frequency of the occurrence of the target structures displays the relationship between language acquisition and markedness as productivity criteria puts forward. The productivity perspective of markedness states that marked structures of a language occur less frequently compared to the unmarked structure. Therefore, it is asserted that unmarked structure, more frequently found in the input, are more likely to be acquired easily and quickly than marked structures in both first and second language acquisition processes (White, 1989).

The second configuration of markedness, Universal Grammar (UG), providing the principles of 'core grammar', is a biologic capacity that human beings have to acquire languages (Chomsky, 1981a, 1981b, 1982). There are limited set of principles that determines the core grammar; however, through exposure a child can set parameters of a language which are open to that specific language. In terms of markedness the rules of the core grammar are considered as unmarked, since they are thought to be acquired with little effort which makes them easy to learn. On the other hand, the peripheral rules are assumed to be more difficult to be acquired compared to the rules of core grammar. Therefore, these rules are acknowledged as marked rules and can only be acquired through positive evidence (Markuzewich, 1984, White, 1989).

Learnability aspect of markedness suggests that the acquisition of a language goes from unmarked structures to marked structures according to the input learners receive by identifying the markedness of these structures (Wolfe-Quintero, 1992b). Governed by the subset principle, the most minimal structure is hypostasized first by the learner, then a less limited possibility is

considered (Wolfe-Quintero, 1992b). Lastly, typological angle of markedness proposes that the relationship of markedness is determined by the constraints and idiosyncrasy of the structures in the individual languages. In other words, the relationship, of which structures are more or less constrained and idiosyncratic than other structures, determines markedness (Wolfe-Quintero, 1992b).

As for markedness in dative constructions, it is stated that while [NP PP] structures have an unmarked idiosyncrasy, [NP NP] forms have a marked feature. This is based on the frequency of dative verbs in English most of which have [NP PP] structure (Mazurkewich, 1984). Therefore, the verbs taking [NP NP] complements are assumed to be a subgroup of the verbs taking prepositional phrases as indirect objects, and prepositional phrase complements are predicted to be learned before double object complements (Fischer, 1971, 1976; Stayton; 1972; Roeper et al, 1981). Furthermore, only the occurrence of [NP NP] structures is constraint by morphological and semantic factors, which leaves [NP PP] complements as the unmarked ones; that is, as a morphologic constraint, the monosyllabic and native origin verbs are the ones that allow dative alternation, which are more frequent in English compared to the polysyllabic and non-native/Latinate origin verbs (Mazurkewich, 1984). In addition, as stated before, semantic constraints govern the dative alternation in certain contexts depending on prospective possessors (Goldsmith, 1980).

Previous Studies on the Acquisition of Datives

Studies conducted in 1970s and 1980s on first language acquisition demonstrated that children at preschool age have difficulty in understanding and imitating English double object datives compared to prepositional datives, and this made people believe that children acquire double object datives after prepositional datives (Fisher, 1971; Cook 1976; Osgood & Zehler, 1981; Roeper et al., 1981). These studies included full NPs for both direct object and indirect object positions and children are expected to imitate and perform these double object and prepositional datives (Pinker, 1984; Gropen et al., 1989). Since it is easier to process prepositional datives when the direct and the indirect objects are full NPs (e.g. 9a and 9b), it is not surprising that Pinker (1984) and Gropen et al. (1989) found it more difficult for children to produce double object dative structures.

a. The cat sent the mouse to the dog.

b. The cat sent the dog the mouse.

Although Wilson et al. (1981)'s study supports the above findings, White (1987) found out that children aged between 3 to 5 can imitate both prepositional and double object datives, which made White think that there is not an order in the acquisition of both structures. However, since it is possible for children to imitate sentences which do not exist in their grammar, White (1987)'s results are somewhat found to be problematic. As opposed to White, Gropen et al. (1989) investigated the child corpora (CHILDES) and concluded that neither of these two structures appears earlier than the other. Also, they found out that these structures can be observed in the second year of children's speech. These findings of Gropen et al. (1989) were also found to be problematic due to three reasons (Snyder & Stromswold, 1997). First of all, they counted utterances in which for-datives and to-datives did not exist. Second, the ages of children that were analyzed were not correct. Lastly, the researchers included only 5 children in their study, which makes it hard to generalize the order of acquisition of double object and prepositional datives.

There are fewer studies investigating English dative alternation in second language acquisition and most of them focus on the difference between alternation and non-alternating verbs. Grammaticality judgment tests were used in majority of these studies, most of which found prepositional dative being acquired earlier than double object dative (Öz, 2002; Hawkins, 1987; Le Comgagnon, 1984; Mazurkewich, 1981; 1984; 1985; Tanaka, 1987). Both Mazurkewich (1984) and Le Compagnon (1984) used grammaticality judgment tests in their studies. While Mazurkewich (1984) found out that French learners of English acquired prepositional dative before double object dative, Tanaka (1987)'s study revealed that double object and prepositional datives were used simultaneously, especially with the verb 'give' by Japanese learners of English.

In addition to investigating the acquisition order of these structures, the effect of alternating and non-alternating verbs also attracted researchers' interests (Wolk et al, 2011; Callies & Szczesniak, 2008; Inagaki, 1997; Davies, 1994; Hawkins, 1987). These studies looked at the possible orders that certain verbs allow; i.e. double object datives and prepositional datives. The results of these studies suggested that second language learners were able to distinguish the verb

categories according to the structures they license (Callies & Szczesniak, 2008; Inagaki, 1997; Mazurkewich, 1984). Moreover, Wolke et al. (2011) found out that while advanced second language learners are better at realizing double object dative verbs which allow both double NP and prepositional constructions, intermediate learners tend notice only prepositional datives.

The Present Study

In order to investigate the markedness in dative structures, both Production and Grammaticality Judgement tests were carried out. Since native speakers of a language are able to judge the grammaticality of the sentences in their language, which shows the linguistic competence of those native speakers (Chomsky, 1965, 1980), it is also expected from second language learners to demonstrate their linguistic competence in a similar way. Although there are disagreements upon the effectiveness and reliability of Grammaticality Judgement Tests claiming that context may affect the grammaticality and interpretability of the sentences (Greenbaum, 1977), many researchers oppose this idea believing that these judgement tests are useful in finding out the linguistic competence of the subjects (Mazurkewich, 1984).

Participants

In total, 50 subjects were recruited among students who were studying at sophomore, junior and senior levels in Foreign Language Education Department at a state university in Turkey. The first language of these participants was Turkish and their foreign language was English. They were learning English approximately for ten years, and as a requirement of the department they had to pass a proficiency exam offered by The School of Foreign Languages or take English preparatory courses for a year in order to be a freshmen student in the department. The aim of these preparatory courses is to enable them to reach at least to B1 proficiency level in English. Therefore, the lowest proficiency level of the participants was assumed as B1.

Data Collection Tools and Procedure

Two types of tests were used in order to collect data; grammaticality judgement and production. Mazurkewich's (1984) Intuitive Judgement Test was used as a grammaticality judgement tool. This test includes *to*- and *for*- dative verbs forming simple declarative sentences.

The sentences are presented in a mixed order in the test. The verbs used in these sentences are presented in the following table:

***To*-dative verbs allowing alternation**	***For*-dative verbs allowing alternation**
give, lend, read, send, throw	bake, buy, choose, make, save
***To*-dative verbs obligatorily taking prepositional phrase complements**	***For*-dative verbs obligatorily taking prepositional phrase complements**
explain, report, suggest	capture, create design

Table 2. Verbs used in grammaticality judgement test

This grammaticality judgement test also included distractor sentences which did not contain any dative verbs. These verbs were take, walk, rescue, chase and annoy. The sentences used in this test were categorized into five types. These types are presented in table 3.

Type-1 Dative verbs allowing alternation with the dative NP in PP	***E.g.*** • Peter threw a ball ***to Philip***. • Diane baked a cake ***for Nicole***.
Type-2 Dative verbs allowing alternation with the dative NP as the first NP of a double-NP construction	***E.g.*** • Peter throw ***Philip*** a football. • Diane baked ***Nicole*** a cake.
Type-3 Dative verbs not allowing alternation with dative NP in PP	***E.g.*** • David suggested the trip ***to Ruth***. • Anne created a costume ***for Sarah.***
Type-4 Dative verbs not allowing alternation but with the dative NP as the first NP of a double-NP construction	***E.g.*** • *David suggested ***Ruth*** the trip. • *Anne created ***Sarah*** a costume.
Type-5 Distractors with no dative verbs.	***E.g.*** • Dennis ***annoyed*** Karen yesterday.

Table 3. The types of sentences in GJT

The verbs that allow alternation were chosen among monosyllabic native origin verbs, while non-alternating verbs were polysyllabic with nonnative origin. Full NPs were used in all sentences and pronouns were not preferred since sometimes people may find a sentence grammatical when the indirect object is a pronoun and when replaced with a full NP they find it ungrammatical (see 10a and b).

a. Ayşe repeated Ali the answer.

b. ?Ayşe repeated him the answer.

The participants were asked to read the sentences and write true (t) if they find the sentence grammatically correct and write false (f) if they find the sentence grammatically incorrect. The students were not given a time limitation during the application of the test. A copy of this grammaticality judgement test is presented in the Appendix.

A picture-cued production test was prepared by the researcher with the same 16 verbs used in grammaticality judgement test. Sixteen pictures were constructed according to the verbs. The order of these verbs were randomized. The aim was to elicit sentences from the participants and analyze their first preferences for dative constructions. They were asked to describe the actions in the pictures with the verb given under each picture. They were also given the subject of the sentences, and asked to write active sentences. They were allowed to use any tense they would like to use without changing the given verb with another one. This picture-cued production test was given before the grammaticality judgement test so that the participants were not influenced by the sentences from it. In order to enhance validity, the test was evaluated by another researcher from the field. A copy of the picture-cued production test was also given in the Appendix.

Results

The participants' answers to both picture-cued production test and grammaticality judgement test were analyzed through counts and percentages. The sentences that they formed in the production test were counted and classified according to the dative structures they used. The ungrammatical and wrong constructions, in which the participants either had a grammatical mistake or another preposition other than *to* and *for* affecting the meaning of the whole sentence, were counted out. The percentages are presented in Table 4.

Verbs	NP-PP Construction		NP-NP Construction		Wrong Preposition Use (to-for)		Ungrammatical/ Wrong Constructions	
	N	%	N	%	N	%	N	%
lend	43	86%	6	12%	-	-	1	2%
read	39	78%	3	6%	7	14%	1	2%
give	45	90%	5	10%	-	-	-	-
throw	45	90%	3	6%	-	-	2	4%
send	44	88%	3	6%	2	4%	1	2%
make	35	70%	3	6%	11	22%	1	2%
bake	36	72%	2	4%	10	20%	2	4%
save	39	78%	-	-	9	18%	2	4%

buy	24	48%	1	2%	22	44%	3	6%
choose	40	80%	-	-	5	10%	5	10%

	NP-PP Construction		*NP-NP Construction		Wrong Preposition Use (to-for)		Ungrammatical/ Wrong Constructions	
	N	%	N	%	N	%	N	%
report	37	74%	1	2%	-	-	12	24%
suggest	39	78%	3	6%	6	12%	2	4%
explain	44	88%	2	4%	4	8%	-	-
design	39	78%	2	4%	9	18%	-	-
create	37	74%	1	2%	12	24%	-	-
capture	33	66%	-	-	5	10%	12	24%

Table 3. Results of the Production Task

As it can be seen from the table, participants had a higher tendency in forming [NP PP] structures compared to [NP NP] ones with both *to*- and *for*- dative verbs. This finding coincides with the results of previous studies done in second language learning research (Öz, 2002; Hawkins, 1987; Le Compagnon, 1984; Mazurkewich, 1981; 1984; 1985; Tanaka, 1987). As these studies suggest, the double-NP structure was found to be marked and prepositional dative structure was unmarked. Therefore, while Turkish second language learners of English have problems in forming [NP NP] structures, it is much easier for them to construct prepositional dative forms.

When *to*-and *for*-dative verbs were compared, even though participants preferred prepositional structures over double-NP ones, there is a slight difference between their percentages. It is noteworthy to highlight that with *for*-dative verbs, participants used *to*-preposition, while with *to*-dative verbs they had very low percentage of wrong preposition use. In other words, these participants used the preposition *to* instead of *for* in prepositional dative structures. The study conducted on French and Iniktitut (Eskimo) native speakers whose second language was English revealed a similar result, indicating that the accuracy of *for*- dative structures lagged behind *to*-dative ones (Mazurkewich, 1984). Furthermore, research on first language acquisition also demonstrates the difficulty in the process of *for*-datives for children, which may be the result of a difficulty in acquiring the semantic notion of benefactiveness compared to the notion of goal (Fischer, 1971). Therefore, the participants' tendency to use *to* with the *for*-dative prepositional structures may be the result of their order of acquisition of the semantic notions of benefactiveness and goal.

Lastly, Table 4 demonstrates that with polysyllabic non-native origin verbs which do not allow alternation, participants mostly produced correct sentences with [NP PP] structures. Although some participants formed double-NP structures with these verbs, majority of them constructed the correct form. However, some of them used wrong prepositions again with the verbs taking the preposition *for*. This can also be explained by the acquisition of the order of semantic notions, *goal* being acquired before *benefactiveness*. Furthermore, participants' having little incorrect sentence formation may be the result of the marked and unmarked features of dative structures. In other words, since these students preferred the unmarked [NP PP] structure and very few of them used the marked structure [NP NP] with the verbs allowing alternation, they may not have the knowledge that these polysyllabic verbs do not allow alternation, but instead may be affected by their preference in unmarked structures.

The participants' judgements to the sentences in grammaticality judgement test were counted and classified according to the sentence types that stated in table 2. They were also categorized according to the prepositions they take. The results of the grammaticality judgement test are presented in table 4.

To-Dative	K	Percent	Mean	SD	For-Dative	K	Percent	Mean	SD
Type-1: *Peter threw a football to Philip.*	5	97.8%	4.89	.51	**Type-1:** *Dianne baked a cake for Nicole.*	5	99.2%	4.96	.28
Type-2: *Peter threw Philip a football.*	5	31.6%	1.58	1.8	**Type-2:** *Diane baked Nicole a cake.*	5	25.6%	1.28	1.8
Type-3: *David suggested a trip to Ruth.*	3	98.6%	2.96	.19	**Type-3:** *Anne created a costume for Sarah.*	3	96.6%	2.90	.36
Type-4: * *David suggested Ruth a trip.*	3	78%	2.34	.98	**Type-4**: **Anne created Sarah a costume.*	3	82%	2.46	.93

Table 4. Results of the Grammaticality Judgement Test

The results in table 4 support the findings of the picture-cued production test, as with both *to*- and *for*- dative verbs allowing alternation, participants judged type-1 sentences as correct with a quite high percentage, and majority of them found type-2 sentences grammatically incorrect. Therefore, as other studies (Öz, 2002; Hawkins, 1987; Le Compagnon, 1984; Mazurkewich, 1981; 1984; 1985; Tanaka, 1987) suggest, for these participants the [NP NP] structure was found to be

marked and the [NP PP] structure was found to be unmarked allowing them to use it more extensively than double-NP forms. When the judgements for type-1 *for*- and *to*- dative sentences compared, no big difference was found between these two prepositions in terms of correct judgements.

The accuracy of the judgements for type-3 sentences were quite high along with the ones for type-4 sentences that are ill formed. This means that most of the participants did not make any mistake in judging type-4 sentences as incorrect. It seems quite possible that these students may have the knowledge of non-alternating dative verbs by looking at table 4. However, their little use of double-NP form for alternating verbs in table 3 throws suspicion on the acquisition of non-alternating verbs. Therefore, the widely usage of prepositional datives as unmarked forms may have affected they choices in grammaticality judgement test resulting in the correct judgement for type-4 sentences. Here, again there is not difference between *to*- and *for*- preposition types in students' judgements.

Conclusion and Implications

The aim of this study was to investigate native and non-native origin dative verbs and the markedness of the verbs allowing alternation among second language learners of English whose native language was Turkish. The results of both picture-cued production test and grammaticality judgement tests revealed that [NP PP] structures of alternating dative verbs were unmarked and [NP NP] forms were marked for these learners. The input these leaners receive from the environment is different from the ones in first language acquisition, and teacher correction and peer learning may have an effect on second language learners by providing them with negative evidence (Mazurkewich, 1984). Also, when learnability aspect of markedness is taken into account, language teachers should keep in mind the order of acquisition of these forms and design their syllabus accordingly.

Apart from the markedness of double-NP and prepositional datives, this study also looked at the preposition choices of the participants in both tests. While there was not a big difference between these two prepositional structures among the judgments of the participants, it was found

that they have a tendency to use *to* instead of *for* in prepositional datives and most of their mistakes depended on this wrong preposition use in the production test. As previous research in the field suggest, the difference in the semantic notions of benefactiveness and goal can be taught to second language learners as they may have set an order for these two notions in their learning process. Furthermore, these two notions have difference in their markedness, benefactiveness being the marked one and goal as the unmarked. However, in order to decide upon this issue of markedness between two preposition further studies must be needed.

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A Systematic Review of Professional Development Programs for Language Teachers over Ten Years: Regional Perspectives

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Abstract: The concepts of what it means to be a learner and a language teacher have radically changed with the developments that caused English language to become a lingua franca around the world. In response to such radical changes, language teachers are urged to constantly reconstruct their knowledge, improve their practices, attitudes and beliefs accordingly. Professional Development (PD) programs are a way of improving language teachers' practices. In this systematic review, the qualitative studies about PD programs in the field of foreign language teaching were reviewed according to predetermined criteria. Selected studies were analyzed using MAXQDA software. The analysis of selected articles shows that there are regional patterns in terms of the purpose of PD. While Region 1 focused on framing PD activities around educational policies, the studies in Region 2 focused on integration of technology and collaboration in PD activities. In addition, the studies were diverse in their methodological and theoretical frameworks. It is concluded that there is a need to explore the experiences of language teachers after they attend PD programs.

Keywords: professional development (PD), teacher learning, English language teaching, systematic review, MAXQDA.

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Introduction

The number of culturally and linguistically diverse learners continues to increase, and there is a need to meet the needs of such learners (Hutchinson & Hadjioannou, 2011; Miller, 2011) and the concepts of what it means to be a language learner and a language teacher have radically changed with the historical and current developments that caused English language to become a lingua franca. In response to such radical changes, language teachers are supposed to constantly reconstruct their knowledge, improve their practices, attitudes and beliefs accordingly. In the field of teaching English as a foreign language (EFL), there have been methodological shifts from traditional grammar-based methodologies to more communicative approaches and these shifts entail an update on teachers' traditional roles and adoption of new perspectives. In addition, today's complex societal and economic issues necessitate a great number of students to be ready for challenging forms of learning than ever before in history, and preparing students requires teachers' continuous Professional Development (PD) (Bransford, Darling-Hammond, & LePage, 2005). PD programs are a way of improving language teachers' practices and the importance of teachers' professional development as a means to improve and (re)structure teaching practices, teacher quality, and students' academic attainment has been researched extensively in the literature (Avidov-Ungar, 2016). In addition, teachers' professional development is presented in the relevant literature in varying ways, and the ultimate goal of professional development is that it is about teacher learning, exploring new routes of how to learn, and applying theory into practice to enhance student growth (Avalos, 2011).

Research exploring teachers' professional development presents diverse methodological designs based on sound theoretical frameworks resulting in practical discussions regarding the entire process. Along with this diversity, research in professional development covers a wide range of subjects (e.g. language teaching, mathematics, social sciences, and others), and different geographical locations. In this systematic review, we aim to present a decade of research between 2005-2017 that targets EFL teachers' professional development and teacher learning. In order to systematically review literature, first definitions of key terms are offered. Then, data collection and analysis procedures are elaborated on.

Definition of Key Terms

This systematic review focuses on EFL teachers' professional development and EFL teacher learning. Based on the foci of this paper, the terms EFL, professional development and teacher learning should be clearly defined. Firstly, according to Cambridge Dictionary, EFL is "English as taught to people whose main language is not English and who live in a country where English is not the official or main language". Similarly, Horwitz (2008) highlights the importance of first language (L1) in EFL settings because EFL is a setting where L1 is predominantly used. Thus, use of L1 can easily influence both language teachers' and students' language proficiency and attitudes about English language (Harmer, 2007). In EFL settings, it is probable that English language learners have difficulty in contextualizing English language learning, and it leads to rethinking of language teaching and language teaching methods on the basis of theoretical and methodological developments in the field (Burns & Richards, 2009). To revisit their language teaching practices, language teachers need to grow professionally throughout their academic career. Hence, professional development is defined as activities that aim to enhance professional growth (Burns & Richards, 2009; Goh & Loh, 2012) helping teachers understand teaching and learning processes better and increase understanding of their learners (Darling-Hammond & McLaughlin, 2011). Alternatively, professional development can be defined as continuously developing teachers' knowledge and professional skills throughout their educational career, during which professional teacher identity is shaped and theoretical knowledge is transformed into practice (Bolam, 2002; Kuijpers, Houtveen, & Wubbels, 2010). Also, the focus of professional development is long-term growth of teachers (Hos & Topal, 2013; Richards & Farrell, 2005) and it is an active, practice oriented, and ongoing process that integrates teaching practices and professional development activities (Bolam, 2002; Borko, Jacobs, & Koellner, 2010; Doering, Hughes, & Huffman, 2003; Saito, 2012). Professional development activities can include individual professional development, continuing education, collaboration, study groups, and peer coaching and mentoring.

Even though professional development can be defined in alternative ways, and include a variety of activities, two types of language teacher professionalism are identified: sponsored professionalism and independent professionalism. While sponsored professionalism refers to

professional development activities based on institutional and policy requirements, independent professionalism is teachers' autonomous learning to adjust his/her teaching based on the needs of teaching situation (Leung, 2009). In either type of professionalism, teachers are supposed to re-contextualize the knowledge acquired/learned through professional development activities, and integrate them into their own teaching practices and their professional identities to improve their teaching practices, and enhance professional identity (Burns & Richards, 2009; Feiman-Nemser, 2008).

Relevant literature on teacher-learning, which is mostly intertwined with professional development, shows that teachers build a theoretical knowledge repertoire in their initial teacher education, and when they start to teach, they evaluate, extend or strengthen their teaching skills accordingly (de Vries, van de Grift, & Jansen, 2014). Yet, teacher learning is not limited to their initial teacher education because teacher learning is considered to be an ongoing professional development process which possibly leads to the changes in behavior (Zwart, Wubbels, Bolhuis, & Bergen, 2008). It is also quite likely that teacher learning can take place in informal settings in day-to-day activities and without planning (van Eekelen, Boshuizen, & Vermunt, 2005). Such a perspective entails that teacher learning is the process of accumulation of knowledge based on formal and informal activities which are socially mediated and unique to particular teaching context (Hammerness, Darling-Hammond, & Bransfords, 2005).

Consequently, the relevant literature on professional development and teacher learning shows that developing professionally in EFL settings ideally requires teachers' reflection on their own professional goals, and teacher learning can evolve from the experiences which provide different opportunities for active, continuous learning that enhances their understanding of classroom practices (Borko, 2004; Nelson & Slavit, 2008).

Methodology

Researchers in education need to follow relevant studies, evaluate their validity and reliability, and intergrade plausible results with the findings generated from previous research in order to keep up with the developments in the field. Yet, it becomes extremely difficult since

research findings accumulate rapidly (Corcoran, Pillai, & Littell, 2008). This necessitates analyzing and synthesizing relevant research systematically, and systematic reviews become favorable for the purposes of review of large literatures as opposed to traditional literature reviews. Traditional literature reviews can be easily manipulated to show what the reviewer wants because literature reviewers fail to apply prescribed methodology to the review process (Petticrew & Roberts, 2006). Such a review can possibly lead to biased conclusions. Another critique of traditional literature reviews is that they mostly summarize study samples without systematic or critical lens.

In contrast to traditional literature review, Gough, Oliver and Thomas, (2012) define systematic review as "a review of the research literature using systematic and explicit, accountable methods" (p. 5). It is clear that a systematic review aims to synthesize research comprehensively in response to a particular question based on several criteria, by using organized, structured and replicable procedures at every step in the process of systematic review. Even though systematic reviews are distinct as a methodology, they are highly compatible with the approaches to synthesizing relevant literature (Corcoran, Pillai, & Littell, 2008).

Systematic reviews can be used for different purposes. On one hand, they can be used for summarizing large amount of empirical and non-empirical research and produce new insights for the relevant field (Jesson, Matheson, & Lacey, 2011). On the other hand, they are used to critically analyze possible trends, directions and variations in the reviewed field, and detect any possible biases or errors (Gough, Oliver, & Thomas, 2012). Regardless of research purposes, each step should be clearly documented so that the readers can trace reviewer's methods and rationale in systematic reviews. In the following sections, the process of identifying relevant studies for the purposes of this systematic review is explained in detail with their rationale. Then, data analysis procedures are discussed.

Identifying Studies

In this study, in order to systematically review relevant literature, several criteria have been determined. Each criterion has been explained throughout this section. In order for an article to be included in this systematic review of literature, the article needs to meet the following criteria:

1. Be published between 2005-2017 in SAGE Journals Online, ERIC, and Elsevier databases

2. Include EFL teachers' professional development

3. Must be an empirical research study

4. Must be qualitative

4. Represent different geographic locations (three regions)

5. Be published in English

An article is supposed to be published between 2005-2017 because this paper aims to capture recent issues regarding professional development in EFL (settings). The selection of the databases stated above is not random as SAGE Journals Online, ERIC, and Elsevier databases have been selected in order to ensure quality peer-reviewed studies. Journals in the selected databases have clear publication procedures, established academic rigor, and publish their issues regularly, and are accessible via university libraries. Secondly, the focus of this paper is professional development in language teaching, so the studies reviewed in this paper have to include EFL teachers as well as EFL settings. Third, it is aimed to present practical, applicable ideas and issues in EFL professional development in this paper. Thus, the articles that are included in this systematic review have to be empirical and their findings must be grounded on empirical data. Even though there are enactments of educational policies in terms of language teaching and professional development, the application of such enactments takes place in institutions with their focus groups. In addition, it is difficult to assess language teachers' professional development based on standardized measures. Thus, qualitative research is more appropriate for the purposes of this paper and can provide insights from professional development programs and their effectiveness. The articles must be published in English so as to address international readership. Lastly, the articles reviewed are supposed to represent different geographic locations to capture a holistic view of professional development issues across the globe.

In order to identify studies, SAGE Journals Online, ERIC, and Elsevier databases were searched online through using METUnique Search, a service provided by Middle East Technical University's (METU) library. Three Boolean search operators were used: professional development, teacher-learning, EFL Teachers. The search was performed by using keyword function. All databases were searched for the period of 2005-2017 (December, 2016). 233 articles, 125 articles in SAGE Online Journals database, 86 articles in ERIC database, and 22 articles in Elsevier database, were found in total. After reading abstracts of the identified articles, and following identification criteria, 63 studies were identified as related to professional development and/or teacher learning. During the data analysis, it was realized that even though some articles were related to professional development and/or teacher learning, their foci were language teachers in ESL settings (Gleeson & Davison, 2016; Martin-Beltran & Peercy, 2013), mathematics teachers (Bocala, 2015), science teachers (Hardré et al., 2013; Hoekstra & Korthagen, 2011;), social sciences teachers (Sharkey et al., 2016), or the articles were not empirical (Farrell, 2016; Singh & Richards, 2006), so they were excluded from the data. There were 29 articles that fully met the criteria.

Data Analysis

After identification of the studies, the data were stored in MAXQDA software and analyzed. In the initial stage of data analysis, identified articles were organized according to their context. In order to find possible patterns in the second stage of data analysis, the articles were read and coded according to their participants, methodological approaches and theoretical frameworks. In the third stage, data collection procedures and tools in identified articles were determined. Then, the tools used for professional development, and the purpose of professional development were specified. Lastly, major findings of identified articles were coded. Figure 1 shows the steps of data analysis process.

As illustrated in Figure 1, eight categories emerged from the data analysis. These categories were then used to construct a summary grid of the analyzed studies for further analysis. The summary grids were organized according to contexts of the identified studies to show possible theoretical and methodological patterns as well as overlapping findings.

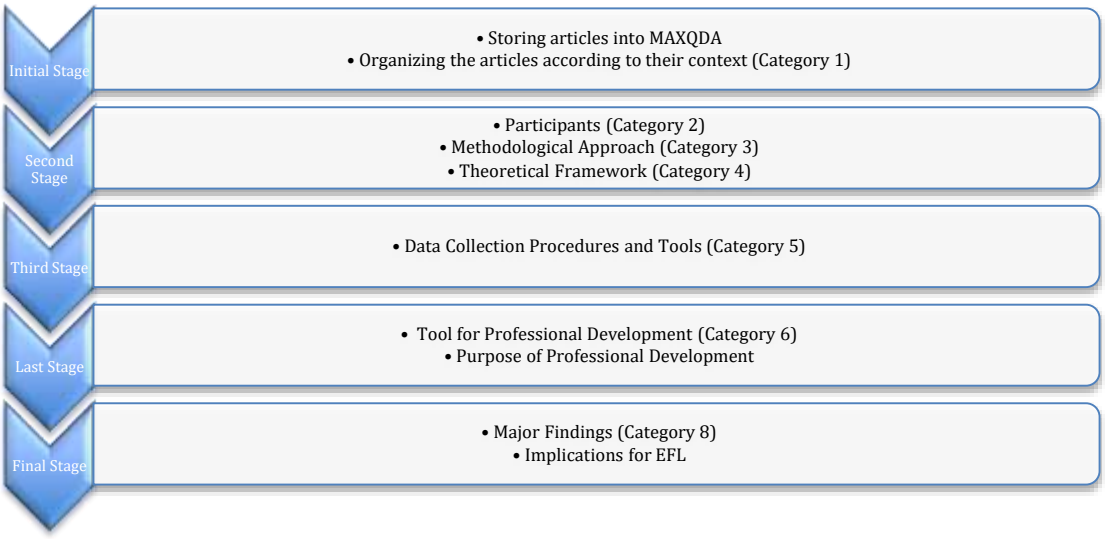

Figure 1: Steps of Data Analysis

Findings and Discussion

Based on the data analysis, the findings are grouped into four regions. Region 1 refers to European countries, Region 2 refers to Middle East and Region 3 refers to studies in EFL professional development in Asian countries. The regional grouping of the studies is illustrated in Figure 2 below.

Region 1: European Countries

During the data analysis, 6 studies were included in the European context in this systematic review as illustrated in Table 1 below. Interestingly, majority of the studies do not have a theoretical framework explicitly stated in the articles. Even though initial teacher education provides a wide range of theoretical knowledge, and shape initial teacher education according to this theoretical knowledge (de Vries, van de Grift, & Jansen, 2014), it is noteworthy most of the studies on professional development and teacher learning in Region 1 lack a sound and clearly defined theoretical framework.

All of the studies were small scale, and either part of a project (Kiely & Davis, 2010; O'Dwyer & Atlı, 2015; Zwarta, Wubbelsb, Bolhuisc, & Bergen 2008), or (under)graduate studies

(Kocaoglu, 2008; Susoy, 2015; Yumru, 2015). The PD programs offered in these articles were of sponsored professionalism. Leung (2009) suggests that sponsored professionalism can frame the content and purpose of PD programs. Similarly, the studies that were a part of a project were based on educational reforms in Region 1, and PD programs were framed according to the educational policies and reforms in their context. It is obvious that the educational policies go hand in hand with the purpose of PD programs, and the outcomes of PD programs were expected to be in similar direction with educational policies in their contexts.

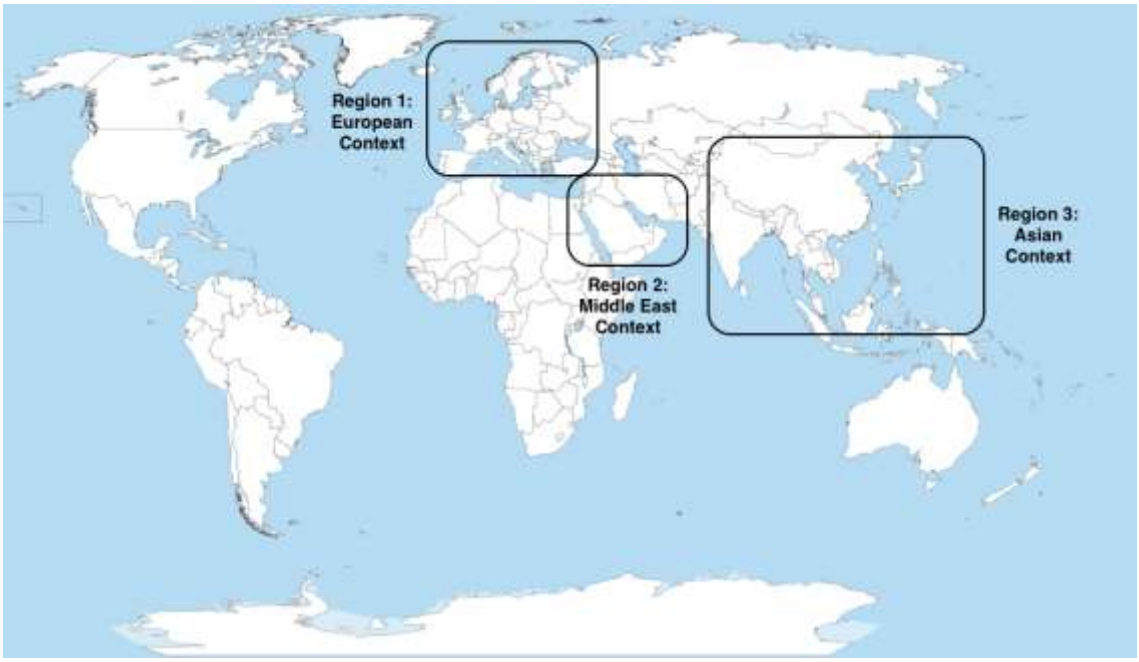

Figure 2: Regional Grouping of the Studies

In addition, the studies in the European context employed a variety of methodological approaches such as case studies, action research and grounded theory, and interviews were predominantly used as data collection instruments along with teacher reports in these studies. These methodological approaches were interpretive in nature, and interpretive research is a great tool for understanding of local contexts (Borko, Whitcomb, and Byrnes, 2008). PD programs in these studies aimed to improve language teaching practices in their contexts. Also, Florio-Ruane (2002) suggests that insiders' perspectives are important sources for understanding processes in natural

settings in PD activities. In similar vein, the studies in Region 1 gave importance to teachers' perspectives to understand PD programs instead of applying top-down processes in language teaching field, which mostly does not take language teachers' perspectives into account. For example, in Zwarta, Wubbelsb, Bolhuisc, and Bergen's (2008) study, a 1-year reciprocal peer coaching trajectory was explored, and it was found out that the chance of PD is low with mere interaction with the colleagues. Instead, observing each other's lessons provided the relevant information for potential teacher growth to the participants in this study, and they acquired insiders' perspectives to offer their suggestions for practical implications.

In addition, PD programs ideally should result in changes in language teachers' teaching practices (Zwart, Wubbels, Bolhuis, & Bergen, 2008). The studies implicated that participants used video-recordings, observations, and their artifacts to see how they professionally grow. Participants' choice for such data collection shows that the participants' search for concrete evidence in their professional development was a way of detecting changes in one's teaching practices. In Yumru's (2015) study, she organized an MA course called Teacher Development in a way that the participants, who were in-service EFL teachers, could record their classroom teaching and present it in the course in order to discuss and provide suggestions for professional growth. It was also found that analyzing video-recordings of the classroom practices were helpful for professional development, yet follow-up discussion is vital in order to assess and ensure PD for teacher learning and growth.

In a similar study, Susoy (2015) explored reflective practices of pre-service EFL teachers through video-recordings. It was recognized that pre-service teachers in this study had various difficulties in constructing their professional identity and ensuring professional development in their initial teaching experiences. These difficulties were reported as English language proficiency, restructuring their language teaching practices, and obtaining constructive feedback. Providing them feedback based on concrete evidence from the video-recordings helped them to grow professionally and realize the challenges regarding the initial language teaching experiences.

Critical analysis of the studies in Region 1 reveal that observations, video-recordings, reflective sessions and PD programs are fruitful in terms of teacher learning and professional

growth, and it is suggested in the literature that professional development should be ongoing and have a long-term effect on teaching (Burns & Richards, 2009; Leung, 2009). However, none of the studies explored long-term effects of PD because data collection process was completed during the professional development activities, and further data after the completion of PD activities was not gathered.

Region 2 & 3: Middle East and Asian Counties

Five studies in the Middle Eastern (Region 2) context and 12 studies in Asian context have been identified and included in this systematic review. Personal narratives and reflection emerged as two central issues in Region 2. Narratives in the field of language teaching can yield societal, cultural and personal issues in one's teaching practices and it is necessary that the context of PD include both the linguistic features of the target language and its individual, social and cultural dimensions (Franson & Holliday, 2009), as a culturally responsive language professional language teacher identity is constructed through time in an EFL context (Cinarbas & Hos, 2016).

Author(s) and Context	**Theoretical Framework, Methodology and Data Sources**	**Participants**	**Tool for Professional Development**	**Major Findings**
Atai & Nejadghanbar (2016) Iran	Grounded Theory: Blogging	6 in-service teachers	In-service training: Critical incidents	Critical incidents for reflection Documenting critical incidents and reflections as a means of PD
Parsaiyan, Ghajar, Salahimoghadda, & Janahmadi (2016) Iran	Narrative Inquiry: participants' narratives, e-mail correspondences	1 language teacher and 1 material developer	Self-narratives	Need for awareness in local cultures, literature and history Importance of support from experts
Nami, Marandi, & Sotoudehnama (2016) Iran	Social Constructivism: Case Study: Interviews,	5 in-service teachers	Lesson study project	Collective lesson planning as a means of PD Importance of observation

Author(s) and Context	Theoretical Framework, Methodology and Data Sources	Participants	Tool for Professional Development	Major Findings
Zwarta, Wubbelsb, Bolhuisc, & Bergen (2008) Netherlands	Different types of learning activities: Grounded Theory: Interviews and Teacher Reports	8 high school teachers	The reciprocal peer coaching trajectory	Importance of the context where teacher learning takes place Potential power of learning from observing
Yumru (2015) **Turkey**	Qualitative Research: Professional development portfolio reports	20 EFL teachers working at state schools	MA Course	Self-monitoring through video recording and self-evaluation for professional growth Importance of involvement in systematic and continuous PD activities
Susoy (2015) Turkey	Case Study: Video recording, interviews	3 pre-service EFL teachers	Use of video recordings	Video recordings as a means of constructing professional identity Reflective practice through video-recording analysis
O'Dwyer & Atlı (2015) Turkey	A Model of the In-service Educator Role: Grounded Theory: Interviews and Focus groups	6 EFL in-service educators	In-service education	Importance of establishing clear criteria and carrying out reflective practices Institutional influence on PD
Kocaoglu (2008) Turkey	Case Study: Interviews	5 pre-service teachers	Electronic portfolio	Alternative ways of getting support for PD Portfolios as a source of displaying pre-service teachers' learning Limited reflection on professional learning process
Kiely & Davis (2010) UK	Progressive Action Research: Video Recording, Interview, Written reflections	In-service teachers	The CPD Program	No direct link between scholarly readings and its influence on teachers' PD Determining PD activities based on the teachers' needs Collaboration as a means of teacher learning.

	observation and teacher reflections			Use of technology in PD Difficulty in providing feedback
Avidor-Ungar (2016) Israel	Grounded Theory: Participants' narratives, interviews	43 EFL in-service teachers	Life story narratives	Different sources and worldviews of motivation for PD PD for career growth
Zandi, Thang, & Krish (2014) Iran	Community of Practice: Action Research: Blogging and teacher reflections	7 university teachers	Blogging	Effects of incorporating technology into the teaching of writing Blogging for the purposes of awareness raising & PD

Table 2: Voices from Middle Eastern Countries

Similarly, Parsaiyan, Ghajar, Salahimoghadda, and Janahmadi (2016) explored a language teacher and a material developer's PD experiences through narrative inquiry in Iran. They found that collaboration and support from the professionals are vital for teacher growth, yet there is a need to take local cultures, literature and history into consideration in order to ensure and enrich professional development.

Avidor-Ungar (2016) also explored PD experiences of 43 EFL teachers through personal narratives in Israel. The findings of the study show that PD requires intrinsic and extrinsic motivation and EFL language teachers integrate different sources of motivation during the PD activities. Also, the purpose of PD in this study is dependent upon the worldviews of the participants and PD is considered to be a tool for career growth.

In addition, using technology in EFL classrooms is a recent trend in the field of language teaching, and hence EFL teachers are supposed to learn multiple ways of using technology in the classroom (Hos, Yagci, & Cinarbas, 2016). To learn multiple ways of using technology necessitates that language teachers technologize their professional development (Alimirzaee & Ashraf, 2016) because the advent of technology can be an alternative means of developing professionally (Liua & Kleinsasserb, 2014).

However, even though language teachers try to professionally develop making efficient use of technology, technological equipment of the schools may not suffice for PD activities. Chen

(2012) in the Asian context investigated cyber collaboration between in-service and pre-service EFL teachers and found that using technology for PD purposes has several advantages and limitations. Synchronous and asynchronous collaboration between the participants resulted in language proficiency improvement, enhanced reflection and awareness of social issues. Yet, it is important to consider infrastructure of the institutions where language teachers participating in PD programs are teaching. Otherwise, there will be a mismatch between the purpose of PD programs and language teachers' application of them in the absence of necessary equipment.

Collaboration is an important component of professional development and teacher learning (Johnston, 2009) and the results of reviewed studies in the Asian context (Region 3) focused on importance of collaboration among language teachers in order to professionally develop (Chen & Cheng, 2014; Hung & Yeh 2013; Nami, Marandi, & Sotoudehnama, 2016; Radwad & Dixit, 2008). Collaboration theoretically allows for individual and collegial professional development (Johnston, 2003). In line with Johnston's (2003) reasoning, language teachers in Region 2 and 3 collaborated in lesson planning, teaching and reflection, and they highly benefitted from observing each other's teaching practices. It can be inferred that observing one's teaching practices creates opportunities for reflection which leads to teacher learning.

In Nami, Marandi, and Sotoudehnama's (2016) study, they integrated technology and professional development through collaborative lesson study project. It was found that technology implementation through collaborative lesson plan study is beneficial for professional growth and teacher learning as the participants provide feedback for lesson planning, technology use and other pedagogical dimensions. However, in an educational institution where strict rules are followed to assess teachers' language teaching practices and effectiveness of these practices, providing feedback can be seen threatening. Thus, the participants in this study refrained from providing negative and critical feedback, which can be attributed to culture of the institution or the context the study was conducted (Cinarbas & Hos, 2016; Lewis & Tsuchida, 1998).

Author(s)	Theoretical Framework, and Methodology Data Sources	Participants	Tool for Professional Development	Major Findings

Chen (2012) **Taiwan**	Social Constructivism, Case Study: Weekly logs, interviews, open-ended questions	13 pre-service teachers 13 in-service teachers	Task-based tele-collaboration	Minimum use of technology and lack of need to develop professionally Tele-collaboration as a means of two-way beneficial mechanism for PD
Hung & Yeh (2013) **Taiwan**	The Interconnected Model of Teacher Professional Growth Case Study: Group meetings, interviews	1 professor from a public university and 5 EFL teachers	Reader's Theater (RT)	RT as a means of PD School teachers' tendency to inquire classroom practices
Goh & Loh (2013) **Malaysia**	Social Constructivism, Action Research: reflective journals, feedback sessions	26 pre-service teachers	Project	Importance of communication and interpersonal skills in constructing professional identity Experiential involvement enhanced pre-service teachers' learning.
Choi (2012) **China**	Case Study: Participants narratives	1 in-service teacher	Narrative Inquiry	Re-conceptualizing and contextualizing knowledge Turning theory into practice Necessity of sociocultural understanding of PD
Bai (2014) **China**	Case study: Focus group interview, observations	4 in-service teachers	School-based PD program	Positive attitudes towards PD Difficulty in providing constructive feedback

Table 3a: Voices from Asian Context

Instead, peer evaluation and critical constructive feedback should be emphasized in language teaching environments in order to help EFL teachers grow professionally. Similarly, collegial feedback for professional development is considered to be non-threatening due to its personal nature and the participants in Goh and Loh (2013), and Gan's (2014) studies benefitted from it. In Goh and Loh's (2013) study, an undergraduate course was designed to promote professional development of the pre-service teachers in Malaysia, and it was found that reflective activities helped pre-service teachers in the study to be empowered in their profession and the collaboration process served as a scaffold for the pre-service teachers, which resulted in professional growth. Thus, Collaboration and mentoring are indispensable for teacher learning and Malderez (2009) suggests that mentoring establishes a sheltered environment for professional development. The sheltered environment allows teachers to build rapport and trust with each other and supports their collaboration.

Radwad & Dixit (2008) India	Participants' narrative	18 in-service teachers	English Teachers' Club (ETC)	Positive influence of ETC on professional development Importance of collaboration among ETC members for PD
Gan (2014) China	Sociocultural approach Case Study: Interviews and reflective journals	17 pre-service teachers	Practicum	Sheltered environments for developing professionally Importance of observation Collaboration for constructing professional identity
Chen & Cheng (2014) Taiwan	Community of Practice Case Study: Interviews, field notes, focus group interviews	2 in-service teachers	Situated learning	Importance of team-teaching in PD Importance of guidance and support Informal interactions for PD
Sakamoto (2010) Japan	Case Study: Interviews, reflective journals, student artefacts	1 in-service teacher	Team-teaching	Cognitive, emotional and collegial awareness for PD Importance of teacher narratives Importance of reflection on PD
Xu (2014) China	Narrative Study: Narrative data from 104 teachers and in-depth interviews with 4 teachers	4 in-service teachers	Classroom research	Necessity of professional development in initial teacher education Preparing language teachers to be research competent Policies and institutional support is not enough for professional development
Kong (2016) Vietnam, China, and Taiwan	Case Study: Interviews and e-mail correspondences	3 in-service teachers	MA program in TESOL	Importance of MA program as a professional development program Reflection on application of content

					knowledge to teaching practices Importance of context for application of professional development activities
Kang & Cheng (2014) **China**	Case Study: Interviews, observations and field notes	1 in-service teacher	group	Teacher	Importance of practice based professional development Providing feedback Individual active professional development

Table 3b: Voices from Asian Context

Conclusions

In this paper, regional differences in language teaching PD activities and teacher learning issues were systematically reviewed. The systematic review was conducted based on predetermined criteria to identify relevant studies. After conducting a systematic literature review, 29, out of 233, studies, meeting the criteria, were identified. The studies were divided into three regions, depending on where the studies were conducted, and analyzed accordingly. The analysis reveals that there are regional differences in terms of the theoretical and practical background and contexts of the studies. While Region 1 focused on framing PD activities around educational policies, the studies in Region 2 focused on participants' narratives and collaboration in PD activities. In Region 3, integration of technology in PD activities were emphasized.

In the European context, video-recordings enhanced reflective practices, helped the participants establish a professional EFL teacher identity, which resulted in professional growth. In the Middle Eastern context, the analysis of the participants narratives revealed that cultural and personal issues should be taken into consideration when planning a PD program because these issues influenced collaboration and feedback activities. In the Asian context, implementation of

technology in PD activities was explored and such activities were found to be beneficial for professional growth. Yet, the infrastructure issues need to be resolved prior to the PD activities and PD activities needs to target potential areas of improvement with the available technological equipment.

From a methodological standpoint, case studies were predominantly used in all regions, and interviews were the primary data collection instruments, yet participants benefitted from observing each other's classes. Thus, data collection procedures can be extended to include such observations and field notes. Also, collaboration as a means of PD was favored in reviewed studies, so methodological pluralism can yield valuable findings of teacher learning through collegial support and guidance.

What is lacking in the reviewed literature is that none of the studies explored experiences of participants after PD programs. As suggested in the literature, professional development should be ongoing and continuous so there is a need to explore the attainment level and the sustainability of the PD programs before, during and after PD activities. In addition, the reviewed literature showed that PD activities can help language teachers construct and improve their professional identity, yet the questions of how and in what ways they can use PD activities to construct their professional identity still remain unanswered.

Lastly, this systematic review has some limitations. Including quantitative research in this kind of systematic reviews can provide a more comprehensive picture of the situation in EFL professional development settings. Also, some other databases can be included to increase the validity of systematic reviews.

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Effects of Teaching Collocations on Academic Writing

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Abstract: Lexical knowledge is an essential part of gaining proficiency in a second language. Encouraging learners of second language to use different multi-word combinations and collocations is thought to extend their knowledge in language studies. In the field of ELT environment, a growing number of researchers suppose that after outlining reasonable vocabulary learning goals, educators should underline the importance of teaching lexical collocations reasonably. In countries where English is taught as a second language, learners should be promoted to gather lexical knowledge and achieve four English skills (reading, writing, listening, speaking). From beginning to advanced level, high-frequent collocations can be found mostly in speech and writing. In this study, Turkish EFL learners' lexical collocations knowledge and usage are analyzed in the reading and writing skills. From the results of this research, it can be concluded that teaching lexical and academic collocations provide learners to acquire language effectively and be more fluent in it prominently.

Keywords: Collocations, academic collocations, lexical knowledge, vocabulary teaching.

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Introduction

Collocations as a part of formulaic language are combinations of words from the same or different parts of speech (adjective-noun, verb-noun, adverb-adjective etc…) such as *day trip, organic food, physical contact, to raise awareness* etc… Recent years, research on collocations has been enthusiasm in theoretical and pedagogical perspectives. Since they are assumed as a vital part in the learners' interlanguage development, collocations are essential to learning in second language environment to gain native-like fluency and competence. It can be proposed that the mastery and a well-built usage ability of collocations may let learners acquire natural fluency in English.

Collocations contain two or more vocabulary items and these items come together to compose a unit of meaning. For more than a decade, language instructors are interested in specifying usage of language after learners get a particular degree. One of the most important parts of this specifying term is teaching and learning word units, collocations and idiomatic expressions. There are some reasons for giving an importance to multi-word units. One of them is that English language teachers realize that fluent use of a language is based on learning to use these word groups and expressions (Kennedy, 2003). The other reason is that language learners believe that the production and usage of a new language will be easier after gaining some expressions as a whole; since they will not have to get vocabulary knowledge individually (Palmer, 1933).

Defining Collocation

The term "collocation" was first introduced in the literature by Firth (1957) and defined as a combination of words connected with other words. Collocations have been analyzed from two main approaches (Fernandez & Schmitt, 2015) as phraseological approach and statistical approach. The former approach examines collocations from word combinations aspect with different degrees of fixedness while the latter one investigates this term in different formulas which are used to construe corpora and also to explore the vocabulary items. Collocational usage can be seen as a basic aspect of idiomatic English. "Idiomatic" term refers to using expressions which sound more natural to a native speaker (Hornby, 2000) However, most ESL practitioners tend to produce more grammatical

sentences than idiomatic ones. The term collocation has been identified as prefabs, multi-word units, and idiomatic expressions.

Gitsaki (1999) proposed three main approaches as lexical, semantic and structural collocations. Firth's *lexical approach* analysis was to determine lexical relations and lexis as syntagmatic instead of paradigmatic ones. In other words, lexis and lexicology shouldn't be considered in grammar; they should be identified as a separate area of specialization. Halliday (1966) and Sinclair (1966, 1987, 1991) are the other followers who maintain the collocation term in lexicology. Halliday et al. (1964) defined this term as the tendency of a lexical item conveying one or more words. From *semantic approach*, researchers define collocations emphasizing the semantic features which determine the collocates (Lehrer, 1974; Cruse, 1986). The main aim in semantic approach is to come out the reason of why some vocabulary items collocate with certain words. From *structural approach*, collocations are divided into two as lexically and grammatically (Gitsaki,1999). In this approach, collocations should include grammar unlike lexical and semantic approaches since lexis and grammar cannot be distinct features. At this point, lexical collocations include nouns, adjectives, verbs and adverbs such as in; *additional information (Adj+N), apply (a) method (V+N), background knowledge (N+N), clearly evident (Adv+Adj), grow rapidly (V+Adv)*. Grammatical collocations consist of a lexical word and a preposition such as in, *marry +to, focus+on, good+at* etc…Although there is no certain definition of collocation, it can be defined as word combination from lexical or grammatical classes to produce native-like and natural-sounding English language.

Learning Collocations in ESL Setting

The importance of collocational structures is coming from the reasons underlying the pedagogical aspects. For ESL learners, acquiring productive skills is more dominant and important than receptive skills. In this aspect, learning collocations enables them to be more productive, more understandable and helps them improve their writing abilities (Hunston & Francis, 2000; Wray, 2002). However, mis- or disuse of this pattern discourages L2 learners to learn the nature of collocational use. One of the difficulties arises from the structural differences between two languages. For instance, in English for the collocations "make a mistake (V+N)" and "do

homework (V+N)" are used with different verbs while in Turkish the same verb "do (yapmak)" (hata yapmak or ödev yapmak in Turkish) is used for both of them. Another difficulty occurs because of idiosyncratic nature of collocations as in the examples of "powerful car" and "strong tea". Although *powerful* and *strong* have the same meaning, in other words, they are synonyms of each other, *powerful* cannot be used with "tea" and similarly, *strong* cannot be used with "car" (Halliday, 1966). In fact, as Fan (2008) mentioned, the biggest problem is the lack of exposure to the target language. Native speakers of English acquire collocations inductively and subconsciously, however, non-native speakers do not have a chance to acquire collocation knowledge if they learn this language only in the classroom.

Studies on L2 Collocations

There are many studies on collocations from different perspectives. Some of them have analyzed collocations from lexical perspectives while some have analyzed functional ways of collocations. From lexical perspective, some studies examined verb+noun collocations (Al-Zahrani, 1998; Howarth, 1998), adverb+adjective collocations (Granger, 1998b; Lorenz, 1999) or adjective+noun collocations (Siyanova & Schmitt, 2008). In recent decades, studies on collocations are widely used by native speakers and it can be seen that this formulaic sequences mostly benefit L2 learners to gain a native-like proficiency. In terms of receptive and productive skills, the lack of collocational knowledge can lead to miscomprehension or unnatural usage ability of language (Barfield & Gyllstad, 2009; Martinez&Murphy, 2011). There is a question arising from this knowledge that how much L2 learners know about collocations. In some cases, researchers believe that the ability of collocational use is lower than native speakers since L2 learners make many mistakes (Granger, 1998; Howarth, 1998; Laufer & Waldman, 2011). In a learner-centered perspective, it is believed that L2 learners do not even know collocations since they have no idea about them (Farghal & Obeidat, 1995). In a learning-centered perspective, without explicit approach and teaching deductively, it will not be possible to make L2 learners use these sequences (Peters, 2012).

Although there are lots of studies on learning and teaching environment, Siyanova & Schmitt (2008) have shown that non-native speakers can produce a large number of collocations. In their

research, they studied on 81 adjective-noun collocations (based on frequency and mutual information scores) which learners produced and found that 45% of them were acceptable. Laufer & Waldman (2011) also revealed that L2 learners produced non-standard collocations when they were compared to native speakers. Durrant & Schmitt (2009) found out that Turkish and Bulgarian EFL learners tend to use frequent premodifier-noun collocations similar to native speakers. In a parallel way to frequency levels of collocations, Fernandez & Schmitt (2015) tested 108 Spanish learners of English to analyze their productive knowledge of collocations. They found that L2 learners produced 56.6% correct collocations and this knowledge of collocations correlated with both corpus frequency (.45) and everyday exposure to English (also outside the classroom) in reading activities, movies, social networking etc…

In Turkish ESL environment, there are a few studies on collocations. Gençer (2004) revealed the fact from corpus-driven study analyzing the effect of explicit collocation instruction. It was shown that the group who has taken the instruction (upper-intermediate participants) outperformed the other group who has not taken any instruction in producing collocations. Akıncı (2009) studied on verb+noun collocations and found that explicit instruction and integrated method groups preceded the data-driven learners group, however, there was no significant difference between them. Tekingül (2013) studied on collocation teaching effect on reading comprehension in an EFL setting in Turkey. She has found that there were no significant differences between collocational teaching treatment and single-item vocabulary instruction treatment. There is also a study on EFL teachers' and learners perceptions of collocations (Mutlu & Kaşlıoğlu, 2016). In this study, teachers have an awareness of the importance of teaching collocation to promote vocabulary knowledge. On the other hand, L2 learners do not agree with their teachers in terms of collocation teaching practices and the activity time dedicated to collocations in the classes.

In Turkish EFL environment, L2 learners have problems using or realizing collocations. Besides, they tend to use one-word vocabulary items instead of formulaic sequences and even they do not recognize that using formulaic language sounds more native-like and natural. Also, they should know the fact that collocations will probably bring them more fluency and accuracy.

This research aims to answer the following research questions:

1. Does deductive collocational teaching help students to improve vocabulary knowledge?

2. Does collocational teaching have a positive effect on academic writing?

Method

Participants/subjects

This research took place at a Turkish state university, Translation and Interpreting Department. 76 first year under-graduate student, who were aged 17-19, (31 female, 27 male) attended the study. The level of all participants was supposed to be almost equal since they were tested at the beginning of the semester by "Proficiency and Placement Test" applied by School of Foreign Languages department. The participants were all Turkish students. In fact, there were also students who came to the university as part of Erasmus Exchange Programme; however, they were removed from the study not to affect the reliability and validity of the study and not to include first language effect on vocabulary development. Besides, it was assumed that the participants in the research had the same proficiency level with respect to their vocabulary knowledge of English. Even so, they were tested with Vocabulary Level test (Nation, 2001) to be sure their knowledge was of approximately at the same standard (also see 2.2.1.).

Before the treatment and study, all participants were applied Language History Questionnaire and according to the descriptive statistics, they have learned English at the age of nearly 9 (M=8.72; SD=3.76). 72.4% of participants learned English at the high school for 4 years. Most of them (88%) indicated that their productive skills are better than receptive skills. They also expressed that instructors do not give enough emphasis and importance to the vocabulary knowledge in their department. After this questionnaire, they were handed out the Vocabulary Level Test worksheets and the results have been reported on the next section.

Pilot Study

In this study, a pilot study with 12 participants was applied to see the instruments' reliability and validity. For internal validity testing, the academic collocation list was taken from Pearson PTE Academic site and the frequency of the 60 chosen academic collocations was analyzed by giving the students a list of them. Before the treatment, they were asked whether they were familiar

with these collocations or not. The students scored their knowledge rate from 1 to 4 as in the example (adapted from Tekingül, 2013).

1. I have not seen this collocation before.
2. I have seen this collocation, but I have no idea about its meaning.
3. I have seen this collocation before and I know its meaning.
4. I know this collocation, its meaning and I can use it in a sentence.

After this self-report study, the collocation list was analyzed and sorted according to their familiarity and frequency level taken from population's score (Appendix A). After this pilot study, a test-retest reliability analysis using Cronbach Alpha coefficient was calculated by statistics experts. According to the results, internal consistency coefficient for the 60 collocational expressions (divided into two as pre-and post test before the treatment) was measured as (0.76) and the experts found the instruments and collocations list as reliable.

Instruments

Nation's Vocabulary Level Test

All participants in the study have taken the same Vocabulary Level Test (Nation, 2001) to be sure of comparability of both groups in terms of vocabulary usage level before the treatment. After the test, they were divided into two as experimental and control groups. This test consists of three different parts emphasizing different word levels (2.000,3.000,5.000 vocabulary items) and in each part, there are 10 different sections. These sections include 6 different vocabulary items and 3 different meanings or synonyms. After this test was presented, the participants were asked to choose the correct item and write a number of them as shown below.

1. cap
2. education ___2___ teaching and learning
3. journey ___5___ numbers to measure with
4. parent ___3___ going to afar place
5. scale

6. trick

After vocabulary level test, the statistics results have been found that there were no significant differences between two groups in terms of vocabulary size (t (37)= 2.47, p = .83).

Academic Collocations Test

Teaching "Academic Collocations" is a precious part of English lexis course. The participants from both groups have been presented with a list of academic collocations. In this task, there are 60 noun+verb academic collocations which are used in three reading texts. The participants were given only verb parts of these collocations and instructed to find the noun parts according to the first two letters which were given them as key factors. For instance, as the verb part "apply", they were expected to find the noun part of this collocation "theory" from the first two letters which were written.

e.g. apply th……. (apply theory)

The same test was given before pre- and post-reading texts to see whether there would be an improvement in awareness of collocations after the treatment. According to the results, there is a significant development of participants' awareness scale. The findings obtained from pre-awareness test showed that there was no significant difference between both groups (t (37)= 1.83, p=.64). After the treatment, the same test was given and the results indicate that there is a significant difference between both groups (t (37)= -2.77, p=0.002) and it already proved the improvement process of experimental group analyzing and awareness of collocations. These results proved in a way that collocational instruction and emphasizing academic collocations in teaching process increased second language learners' vocabulary knowledge.

Reading Texts

After the Language History Questionnaire and Vocabulary Level Test, the participants were divided into two as experimental group (n=38) and control group (n=38). Both groups were applied to three different reading passages including academic collocational words. This study was adapted from Zaabalawi & Gould's (2017) study, however, unlike their study, three different reading texts were used in this research and they were produced by course instructor who consulted with native

English teachers at the university. Also, academic collocation list was used in this study. In the texts, there were 15, 20 and 25 collocational expressions respectively and they were all underlined by the researcher. In this task, increasing number of collocations was used not to expose the participants many collocational structures from the beginning of the study since it could cause overloading word process.

Research Design

In this study, experimental research design has been used and pre-test/post-test paradigm has been applied to see the effectiveness of collocational treatment. The course test intervention is composed of 40 hours of lexical and collocational teaching (especially academic collocations) during 10 weeks and four hours for each week. At the beginning of the research, before treatment, each group was given three reading passages consisting of collocations which were all underlined by the researcher. These passages were specifically selected because they were written according to their interests and they were asked to read them carefully and then rewrite these texts from memory. At this point, they were not exposed to any time-limit or word number limit. After they had finished reading the first text, they were shown a list of guided expressions to help them to write as much as they could and the same process was applied for the next two reading texts. After they had completed their rewrite activities, they all were instructed to hand out the new texts.

Treatment

Students in the experimental group were taught collocational expressions. After teaching period, the importance of formulaic sequences in English was emphasized. This treatment lasted about 10 weeks and each week, different reading texts including collocations were introduced to the learners. In total, they experienced 20 reading texts and after they had read them, they were asked to rewrite these texts using guided vocabulary setting, dictionaries and reference books about collocations (i.e. Lewis, 2000; McCarthy, O'Keeffe, Walsh, 2010; McCarthy, O'Dell, 2006). Aside from reading activities, the students were exposed to additional instructional material on formulaic sequences, multi-word verbs, phrasal expressions and collocations in contexts. To sum up, students in experimental group had a chance to get more vocabulary knowledge on collocations and to practice more exercises. On the other hand, students in control group were introduced the same 20

reading passages during 10 weeks-period, however, they were not exposed to the same activities emphasized on collocations. The vocabulary was taught by using synonyms, antonyms or giving translation without focusing on collocations. After reading, they were also requested to rewrite the reading passages just like experimental group.

After ten-week treatment, the three texts which participants from both groups were supposed to rewrite using collocations in the first week were presented again. They were asked to rewrite the same reading passages using the guided vocabulary list presented to them via PowerPoint software. The long period between the pre and post-test ensured the researcher a reliable and verified research since none of the participants recalled the activities (three reading passages) which were given them in week one. During the post-test period, students in each group were expected to read and reproduced the reading passages. This matched-pair design would let the researcher see whether participants in experimental group used more qualified and native-like collocations or not. After the hand-outs were taken from the same students group, the texts were compared with the ones given in week one. The number of collocational usage errors was measured in each test comparatively for each student and the statistical data was given in the following section.

Findings

This research was used to test the hypothesis whether the deductive collocational teaching process helps students to have larger vocabulary knowledge and a better writing ability or not. The results were based on pre- and post- reading texts rewrite activities including academic collocations. Both groups took these reading texts and after the data was collected, the results of the study were analyzed with the help of paired samples t-test in SPSS-20. Besides, the proportion of errors has been indicated to see concretely the results of the participants (see Table 1.)

TEXT-1		M	SD	*t*	df	Sig. (2-tailed)
Pair 1	Exprecoll - Coprecoll	.21053	3.78588	,343	37	.734
Pair 2	Expreerror - Copreerror	,97368	1,90996	3,143	37	,003
Pair 3	Expostcoll - Copostcoll	4,23684	2,88926	9,040	37	,000
Pair 4	Exposterror -Coposterror	,63158	1,96484	1,981	37	,055

Table 1. Results of Reading Passage Rewrite Activity-1 (Paired Samples Statistics and Differences) (For the values shown in both text and tables, full-stops should be preferred instead of commas.)

*Exprecoll: Collocations in pre-test of experimental group *Expostcoll: Collocations in post-test of the experimental group

*Coprecoll: Collocations in pre-test of control group *Copostcoll: Collocations in post-test of the control group

*Expreerror: Errors in pre-test of experimental group
*Exposterror: Errors in post-test of the experimental group
*Copreerror: Errors in pre-test of control group
*Coposterror: Errors in post-test of the control group

The findings obtained from Text-1 pre-tests for both groups have shown that there were no significant differences between them ((*t* (37)=0.34, p=0.734). Before treatment, both groups have used more or less the same collocational expressions in their rewrite texts. However, the errors in their collocational usages for pre-tests of both groups were not similar to each other. Experimental group has made more mistakes than the control group and there was a significant difference between them ((*t* (37)=3.143, p=0.003). There could be some guided effect which has been applied in the class since for the first reading passage experimental group exposed to less guidance than the control group. That is the reason why there were no significant differences between both groups in post-tests collocational errors ((*t* (37)=1.981, p=0.055).On the other hand, in terms of collocational usage which was indicated in post-test, there was a significant difference between both groups ((*t* (37)=2.889, p=0.000).

TEXT-2		M	SD	t	df	Sig. (2-tailed)
Pair 1	Exprecoll - Coprecoll	,31579	4,38736	,444	37	,660
Pair 2	Expreerror - Copreerror	,07895	2,89810	,168	37	,868
Pair 3	Expostcoll - Copostcoll	2,52632	4,18322	3,723	37	,001
Pair 4	Exposterror -Coposterror	-,60526	2,50987	-1,487	37	,146

Table 2. Results of Reading Passage Rewrite Activity-2 (Paired Samples Statistics and Differences)

After the first reading passage, the participants were given the second one which also included collocational expressions, however this time, the number of them was more than the first one. According to the second text's statistics, before the treatment, there were no significant differences between two groups in terms of both collocational usage and errors which were made by the participants (Coll.usage pre-test: ((*t* (37) =0.444, p=0.66; Coll.errors pre-test ((*t* (37)=0.168, p=0.868). Prior to treatment of collocations, these results indicated that the vocabulary knowledge between two groups was similar to each other. When the post-findings were analyzed, it was found out that there were significant differences between two groups in terms of their usage of collocations in rewrite activity ((*t* (37)= 3.723, p=0.001). Although there is no significant difference between collocational errors made by experimental and control group ((*t* (37)=-1.487, p=0.146), it

can be easily understood that the number of control group's errors did not change substantially and this fact can be seen in the table which has shown the proportion of errors (see Table 4. and 5.)

TEXT-3		M	SD	*t*	df	Sig. (2-tailed)
Pair 1	Exprecoll - Coprecoll	-,50000	2,97512	-1,036	37	,307
Pair 2	Expreerror - Copreerror	,23684	2,76498	,528	37	,601
Pair 3	Expostcoll - Copostcoll	2,89474	3,55489	5,020	37	,000
Pair 4	Exposterror - Coposterror	-,39474	2,23655	-1,088	37	,284

Table 3. Results of Reading Passage Rewrite Activity-3 (Paired Samples Statistics and Differences)

The last reading passage consisting of 25 collocational expressions was applied to the participants to make them rewrite the text and the results were not surprising again. Before the treatment, collocational usage and errors did not differ between two groups (Coll.usage pre-test: ((*t* (37) =-1.036, p=0.30; Coll.errors pre-test ((*t* (37)=0.528, p=0.60). After the teaching process of collocational expressions, the results showed that this process was helpful for learners to use collocations more effectively ((*t* (37)=5.020, p=0.000). Similar to the first two texts, the number of collocational errors made by the participants was similar to each other, however, as it was mentioned before, the results of the proportion of errors should be analyzed in terms of the exact correlation between the errors.

Texts	Experimental Group			Control Group		
	Number of Collocational Uses	Number of Errors	Proportion of Errors	Number of Collocational Uses	Number of Errors	Proportion of Errors
Text One	223	130	0.58	215	93	0.43
Text Two	339	146	0.43	327	143	0.44
Text Three	350	172	0.49	369	163	0.44
Total	912	448	0.49	911	399	0.44

Table 4. Collocational Usage and Proportion of Errors in Pre-Test

To analyze the unexpected result of significance between experimental and control group in the first reading passage, the proportion of errors has been analyzed as seen in Table 4. In the pre-test, the number of errors made by the experimental group for the first text was 130 out of 223 collocations, while the number of errors made by control group was 93 out of 215 collocations. At that point, although both groups have been distributed according to vocabulary test result, this was

an unexpected and enigmatic result. However, when the proportion of errors was analyzed for both groups, (0.58-0.43), it was understood that it could be a normal process. Besides, there could be other effects such as the apprehension of new terms, different course design or uneasiness of reading an academic text for the first time. Thus, the design of the study was not changed until the result of the second reading passage was seen for the next week. According to the second re-write text result, the proportion of errors were similar to each other in both groups (0.43-0.44) and the last text's result for the following week was similar to each other (0.49-0.44) again. The final decision was given after these three texts' results and the design of the study was not changed in terms of treatment process or type. After the treatment process for 10 weeks, the following results were taken from both groups (see Table 5).

Texts	Experimental Group			Control Group		
	Number of Collocational Uses	Number of Errors	Proportion of Errors	Number of Collocational Uses	Number of Errors	Proportion of Errors
Text One	398	105	0.26	237	81	0.34
Text Two	459	124	0.27	363	147	0.40
Text Three	507	137	0.27	397	152	0.38
Total	1364	366	0.27	997	380	0.38

Table 5. Collocational Usage and Proportion of Errors in Post-Test

To analyze the nonsignificant effect in a post-test number of errors for all texts between two groups, the proportion of errors results has been gathered. As seen in Table 5, the errors made by both groups were similar to each other computationally. However, when the number of collocational usages was identified, in the first text, while experimental group made 105 errors out of 398 uses of collocations, control group made 81 errors out of 237 uses of collocations. Similarly, for the second text, the experimental group made 124 errors out of 459 collocational uses whereas control group made 147 errors out of 363 collocational uses. Finally, in the last text, the total number of errors made by experimental group was 137 out of 507 collocations; however, 152 errors out of 397 collocations were made by the control group. In brief, the nonsignificant effect between proportions of errors appeared possible while so many collocations were used by the experimental group.

When the proportion of results was defined for the first text, the experimental group made a great success (PoE: from 0.58 to 0.26) while the control group took a small step during the 10-

week process (PoE: from 0.43 to 0.34). In fact, this result could be seen as an achievement for them but it should not be compared with the experimental group. The achievement of the control group was because of too much exposure to vocabulary items during one semester normally. For the experimental group, similar results can be observed for the second (PoE: from 0.43 to 0.27) and the third text (PoE: from 0.49 to 0.27). On the other hand, the control group did not earn a remarkable success when their results were compared with the experimental group. For instance, in the second text, similar to the first one, the proportion of errors increased from 0.44 to 0.40 and in the final text, it increased from 0.44 to 0.38.

Discussion and Results

The paired sample statistics results of pre-test rewrite activity have shown the answer to the first research question on whether deductive collocational teaching helps students to improve vocabulary knowledge or not. The answer of this question is more or less positive from the point of the first class of Translation and Interpreting department students. The result of second research question on whether collocation knowledge has a positive effect on academic writing or not could be seen on paired sample statistics results of post-test rewrite activity. The treatment section for 10 weeks and four hours are considered to be adequately effective.

The current study investigated the collocation vocabulary size of Translation and Interpreting first class students in Turkey and the nature of collocational awareness which do not exist in their native language. In other words, it brings out that although the source language does not have any collocational expressions or structures, the use of such corpus can be raised with sufficient practices and instructions.

The fundamental contribution of this study is that the supplying of lexical approach or vocabulary-based language teaching environment is an effective way to improve second language ability. Besides, imposing these considerations into the pedagogical connections dealing with English language teaching is another beneficial point of view which should be emphasized in this study. Before the treatment period, it was observed that there was no improvement, production or specification of collocations. After this period, collocational guideline improved the vocabulary specification and reproduction process increasingly.

These results show that collocational instruction and teaching academic vocabulary with collocations increased second language learners' vocabulary knowledge and made them recognize vocabulary items in reading and writing passages alternately. According to the results, there is a strong relationship between collocational vocabulary size and effective writing. Participants in experimental group outperformed the control group. One of the reasons for this success is that 10 weeks instruction period was efficient for teaching collocational expressions to them. On the other hand, the similar improvement could not be seen in control group's performance, however, they had an improvement in their general vocabulary size because of too much exposure to vocabulary activities and practices on account of English Lexis course for four hours each week. The vital impact of collocational instruction process included of recognizing and combining vocabulary items together meaningfully to construct a new lexeme. The findings of this study propose that this guideline leads students to produce more effective writing and to gather reading passages without difficulty. Using a lexical approach in a second language teaching environment directs learners to develop their writing ability, to improve reading capacity, and also to get accurate knowledge from native speakers directly. The findings of this study give attention to the development of vocabulary size of Turkish students in a non-native environment. There is a conclusion which should be underlined that collocational teaching experience adds learners' vocabulary knowledge a positive effect. After this period, it can be easily observed that students in lexis course can build their own collocational input automatically and then tend to reproduce them. In any time, EFL learners omit complex utterances and instead of them they tend to use simple and single words; however, they should know that using these one-word items in written or spoken language, in other words, in productive areas, indicates them as non-native speaker exactly. If the learners want to be seen as more native-like and sound more natural, they should use more combined vocabulary items and collocational instructions. One way to solve this unnatural language usage problem is to show them the master ability of using complex and compound sentence structures decorated with fluid native-like language structures. This research also emphasizes some remarkable consequences for English lexis or similar courses.

On the other hand, one of the shortcomings of this study is that the research is limited to only one university and the treatment was limited to 76 students with only three reading passages.

Besides, the usage of academic reading passages is another limitation of this study, because there is a possibility that students are good at understanding high-frequency collocational items in reading and producing them in writing instead of academic ones. The last but not least, the analysis period might have been done more systematically by analyzing every two or three-week periods to see the performance of them in every new period.

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https://pearsonpte.com/wp-content/uploads/2014/07/AcademicCollocationList.pdf

Appendix A. Academic Collocations Awareness Test (Verb+Noun)

	VERB	NOUN		VERB	NOUN
1	acquire	kn…….	31	obtain	da…….
2	add	in…….	32	obtain	re…….
3	apply	th…….	33	offer	op…….
4	attend	co…….	34	perform	ta…….
5	begin	pr…….	35	play	ro…….
6	carry out	re…….	36	present	su…….
7	collect	da…….	37	promote	de…….
8	complete	ta…….	38	provide	op…….
9	conduct	re…….	39	provide	da…….
10	consider	as…….	40	provide	ma…….
11	contain	in…….	41	provide	re…….
12	contribute	de…….	42	publish	jo…….
13	create	pr…….	43	raise	aw…….
14	describe	me…….	44	reach	ag…….
15	develop	ap…….	45	receive	fe…….
16	discuss	to…….	46	record	da…….
17	enhance	le…….	47	report	fi…….
18	experience	pr…….	48	resolve	co…….
19	face	di…….	49	seek	he…….
20	get	fe…….	50	serve	fu…….
21	give	fe…….	51	set	go…….
22	have	st…….	52	share	in…….
23	identify	fe…….	53	show	te…….
24	improve	co…….	54	store	da…….
25	improve	pe…….	55	support	ar…….
26	improve	wo…….	56	take	cr…….
27	increase	aw…….	57	take into	co…….
28	learn	st…….	58	take	re…….

29	make	co…….	59	use	me…….
30	meet	ex…….	60	use	st…….

1	acquire knowledge	21	give feedback	41	provide resource
2	add information	22	have a strategy	42	publish journal
3	apply theory	23	identify features	43	raise awareness
4	attend a conference	24	improve communication	44	reach an agreement
5	begin process	25	improve performance	45	receive feedback
6	carry out research	26	improve work	46	record data
7	collect data	27	increase awareness	47	report finding
8	complete task	28	learn strategy	48	resolve conflict
9	conduct research	29	make comment	49	seek help
10	consider aspect	30	meet expectations	50	serve function
11	contain information	31	obtain data	51	set a goal
12	contribute development	32	obtain result	52	share information
13	create problem	33	offer opportunity	53	show tendency
14	describe a method	34	perform a task	54	store data
15	develop approach	35	play a role	55	support argument
16	discuss topic	36	present summary	56	take credit
17	enhance learning	37	promote development	57	take into consideration
18	experience problems	38	provide an opportunity	58	take responsibility
19	face difficulties	39	provide data	59	use method
20	get feedback	40	provide material	60	use statistics

Appendix B. Reading Text-1 and Academic Collocation List

Attending a Conference

The conference is a vital place for you to meet new people, new points of views, new ideas and cultures. When you **attend a conference** which is related to your area of specialization, you will get opportunities to **acquire new knowledge** and **add information** to your existing capacity. If you are a presenter in this conference, before **completing a task** you should **collect the data** about it. Besides, you should **provide resources** to **carry out an effective research**. Later, you should **apply the theory** which is related to your area of expertise while **conducting the research**. This theory should be analyzed in detail and **contain enough information** to make the research clearer. If you prefer to test your theory, you can use a participant group to be practiced. At this point, you should **use a method** and **provide materials** on your topic. In the end, you should **present a summary** and a conclusion about your topic. Do not forget to practice your presentation and **get feedback** before taking the stage in front of the audience. It will help you **take into consideration** of any difficulties or problems you will face during the presentation.

Academic Collocation List

1	attend a conference	6	provide resource	11	use method
2	acquire knowledge	7	carry out research	12	provide material
3	add information	8	apply theory	13	present summary
4	complete task	9	conduct research	14	get feedback
5	collect data	10	contain information	15	take into consideration

Appendix C. Reading Text-2 and Academic Collocation List

Translator's Conference

An opportunity was offered us by a professor from a state university in Turkey. We **had a strategy** to **perform a task** and a project. First of all, we were supposed to have an interview with professional translators through a project that involves translation studies. We started our project by **creating a problem** and **describing a method** about translation. Then, the chosen **topics were discussed** in the classroom and everybody tried to **make comments** and **gave feedback** about the process so that they were able to **improve their work** and **obtain a result**. Thus, by interviewing translators, we were able to describe what made us **increase our awareness** of translation studies and through this, we have **developed an approach.** During this process, we **faced many difficulties** such as finding translators who were willing to make an appointment for an interview. Unfortunately, not all of them **met our expectations**. We **obtained data** through their answers and tried to find solutions to the **problems we experienced**, overall they **played an important role** in our success on this project. As a result of this study, we **have learned some strategies** about translations and studied it as a science. Hence, we have **enhanced our learning** about the process of translation and **identified features** of it.

Academic Collocation List

1	offer opportunity	6	discuss topic	11	increase awareness	16	experience problems
2	have a strategy	7	make comment	12	develop approach	17	play a role
3	perform a task	8	give feedback	13	face difficulties	18	learn strategy
4	create problem	9	improve work	14	meet expectations	19	enhance learning
5	describe a method	10	obtain result	15	obtain data	20	identify features

Appendix D. Reading Text-3 and Academic Collocation List

Experimenting to Improve PR Efficiency in Business

Setting a clear goal in a public relations (PR) movement **shows a tendency** of increase in the initiative capability of employees. It is an issue that requires **great raise in its awareness** in that, it plays out a vital role in **improving the performance** and the efficiency of PR missions such as **providing an opportunity** for the effective improvement, **reporting findings**, **sharing information** and **resolving conflicts** between separate ideas. Setting communication goals and aims creates lots of benefits. It helps employees know how to **consider the aspect** on planned tasks and to **improve communication** between participants. Many public relations experts are satisfied to express their intentions to **take the credit** for the results and **contribute to the development** in their area. To set a goal, employees first need to **provide data** on the projected action, for example, the **recorded data** which is found by **using statistics**. **Publishing a journal** assists employees in **seeking help** for their ideas through the **received feedback.** In detail, **supporting an argument** and discussing different ideas which **serve as an important function** in improving marketing efficiency **promote development** in this research. It helps employees to **take responsibility** for their actions to **begin to the process** of their research and it makes easier to analyze their **stored data** and to **reach an agreement** after all.

Academic Collocation List

1	set a goal	10	improve communication	18	receive feedback
2	show tendency	11	take credit	19	support argument
3	raise awareness	12	contribute development	20	serve function
4	improve performance	13	provide data	21	promote development
5	provide an opportunity	14	record data	22	take responsibility
6	report finding	15	use statistics	23	begin process
7	share information	16	publish journal	24	store data
8	resolve conflict	17	seek help	25	reach an agreement
9	consider aspect				

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An Analysis of Teachers' and Students' Perceptions on the Use of Smart Boards in Foreign Language Classrooms

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Abstract: This study aims to explore the effectiveness of smart board use in language learning and teaching at the School of Foreign Languages (AUSFL), Anadolu University, Turkey. The study was conducted with teachers and students chosen by convenience sampling method in AUSFL in the 2016-2017 academic year. The participants were six volunteer teachers and 266 students who were taught English by using smart boards. The teachers carried out at least 4 hours of their classes in the classrooms which are equipped with smart boards. The data were gathered by using both qualitative and quantitative methods including surveys,

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questionnaires and semi-structured interviews. The data analysis revealed that both teachers and students found the use of smart boards effective in terms of bringing fun and variety along with better learning to the class.

Keywords: Foreign Language Education, Improving Classroom Teaching, Interactive Learning Environments, Educational Technology, Smart Boards.

Introduction

The place and importance of technological devices in the field of education has become incontrovertible and this has led to the increase of the use of digital learning environments in foreign language learning. Especially in recent years, interactive smart boards which make learning more effective, enjoyable and permanent by supporting interactive and cooperative learning have come first among these digital learning environment technologies (Bulut & Koçoğlu, 2012; Gürol, Donmuş, & Arslan, 2012; Elaziz, 2008; Mathews-Aydınlı & Elaziz, 2010) Smart boards give students an opportunity to share their questions and answers without revealing their names or identities with additional tools such as interactive student response systems, which are remotely controlled tools. With the help of this feature, smart boards help overcome students' shyness and lack of self-confidence which are among the most important problems in foreign language learning. Moreover, the use of smart boards contributes to students' success by supporting students with different learning styles and personalities and facilitating their language learning process. (Momani, Alshaikhi & Al-Inizi, 2016). Several studies (Balta & Duran, 2015; Campbell & Martin, 2010; Elaziz, 2008; Mathews-Aydınlı & Elaziz, 2010) proved that the use of technology in class motivates students and increases their attention to the lesson.

Anadolu University School of Foreign Languages (AUSFL), which offers mandatory and elective intensive English preparatory courses to help about 3000 students each year to cope with their departmental studies aims to make classroom-learning environment more effective by applying contemporary methods. Taking advantage of the benefits of technology in full measure in AUSFL is believed to contribute to increasing the quality of education. Provision of smart boards, which reinforces students' interactive and cooperative learning and makes learning more effective and enjoyable, may help the realization of this aim. It was anticipated that with the use of smart boards in class, our students who are digital natives would participate in classes more

enthusiastically. To this end, the study primarily targeted to determine the teachers' and students' perceptions on the effectiveness of using smart boards in language classes.

Review of Literature

Smart boards

Over the past several decades, technology has come to play an important role in many areas of education, including second and foreign language instruction (Mathews-Aydınlı & Elaziz, 2010). One of the technological tools is smart board which is also named as Interactive Whiteboard (IWB) and it can be defined as a new generation board that has been regarded as a helpful technology that enhances students' learning and motivation, and facilitates instruction for teachers (Türel & Demirli, 2011). By virtue of the supported features of IWB software, IWBs allow users to design and use their own course materials in any file format such as IWB software files, PowerPoint presentations, and Flash animations. By touching on the board with a finger or an IWB stylus, teachers and/or students can control any application running on the computer. Thus, users can manipulate and interact with the course content on the computer from the board by making use of various facilities including highlighting, annotating, drag-and-drop activities, screen shade, zooming, screen-sharing over the Internet, and connection to web-based applications (Türel & Demirli, 2010). Due to the use of different terminology for the same device, in this article, the terms smart board and interactive white board (IWB) are used interchangibly in this paper.

Studies on smart boards

Studies on smart boards have looked at different aspects of them by focusing on both teachers and learners. Some of these studies have been related to the perceptions and attitudes of learners and teachers on the use of smart boards revealing that learners felt positive about the lessons in which smart boards were used, and teachers observed that their lessons were more effective and productive in spite of the difficulties in preparing lessons (Gursul & Tozmaz, 2010; Manny-Ikan, Dagan, Berger-Tikochinski, & Zorman, 2011; Mathews-Aydınlı & Elaziz, 2010). Some recent ones have also been related to student success and the learning process including

gradual learning, and these studies have asserted that integrating smarts boards makes it easy to remember the information and interactive learning which has reinforced effective learning (Miller & Glover, 2009), by increasing the cooperation among students (Schmidt, 2008) and by creating an environment in which students can participate in class activities without revealing their identities and compare their answers with other students, thus, scaffolding language learning (Schmidt, 2007).

As the studies have revealed, compared to other technologies smart boards provide flexibility for teachers (Slay, Siebörger, & Hodgkinson-Williams, 2008), and with more flexible materials, new instructional situations may be designed (Gashan & Alshumaimeri, 2015). However, smart boards themselves cannot be more than a teaching tool so training teachers on how to use smart boards is highly important (Mercer, Hennessy & Warwick, 2010). Getting the most efficient benefits from smart boards is related to how, for what purpose, with which pedagogical beliefs teachers use them (Mercer, Hennessy & Warwick, 2010; Toscu, 2010). Smart boards provide opportunities to design suitable materials including various activities related to different learning styles to ensure students' active participation (Schmidt, 2010). In order to improve learning with smart boards, it is crucial to support and train teachers to be qualified educators (Schmidt, 2009). Otherwise, lack of sufficient training will pose a problem for the teacher during teaching process (Al-Faki & Khamis, 2014; Gashan & Alshumaimeri, 2015).

Apart from these, some studies (Guerrero & Velasteguie, 2017; Soroor, Omid & Afsaneh, 2014; Swan, Kratcoski, Schenker & Hooft; 2010; Toscu, 2013) have examined the relationship between the use of smart boards and its effect on different skills. Controversial findings were reported showing positive influence of smart boards, e.g. on students' reading comprehension ability (Soroor et. al, 2014). On the other hand, Swan et. al's (2010) study revealed no significant relationship between smart board use and reading skill. Guerrero and Velasteguie (2017) and Toscu (2013) looked into the relationship between smart board use and speaking skills and interaction patterns respectively by reaching the conclusion that there was no negative or significantly positive contribution of smart board use in speaking skill.

Lastly, on using smart boards in education, a number of studies focused on teachers' and students' views on their use (Balta & Duran, 2015; Bulut & Koçoğlu, 2012; Gürol, Donmuş,

& Arslan, 2012; Kahyaoğlu, 2011), and especially analyzed the effectiveness and contributions of smart boards in language education (Elaziz, 2008; Gerard & Widener; 1999; Mathews-Aydınlı & Elaziz, 2010). According to Gerard and Widener (1999), smart boards are effective in language education in terms of three main points which are supporting classroom interaction, improving cultural knowledge of the target language and maintaining classroom discipline. Apart from these three points, it was suggested that smart boards affect students' motivation, classroom interaction, creativity and class participation positively (Campbell & Martin, 2010; Elaziz, 2008; Mathews-Aydınlı & Elaziz, 2010; Schmidt, 2008).

As a result, it can be said that smart boards are efficient and modern tools that encourage the use of computers without interrupting the flow of the lesson and improve different learning processes (Gerard, Widener & Greene, 1999). To the best of our knowledge, studies up to date have generally focused on speaking and reading skills (Elaziz, 2008; Toscu, 2013). Thus, investigating the effect of smart boards on other skills in addition to speaking and reading might be necessary.

Research questions

This study focused on investigating the effectiveness of smart boards by finding out about the perceptions and ideas of teachers and students on smart board use at the School of Foreign Languages, Anadolu University. With this purpose in mind, the research questions posed for this study are as follows:

1. What are the perceptions of the students at AUSFL on their use of smart boards in their language classes?

2. What are the perceptions of the teachers at AUSFL on their use of smart boards in their language classes?

3. What are the suggestions of both students and teachers on the use of smart boards in language classes at AUSFL?

Methodology

This research, which aimed at exploring students' and teachers' perceptions on the effectiveness of smart board use in language learning and teaching, was designed using a mixed-method approach.

Research Design

The data for the study were collected through quantitative and qualitative research methods. The quantitative data consisted of Likert-type items in two sets of questionnaires, while the qualitative data comprised the answers to open-ended questions in the questionnaires and the semi-structured interview responses.

Participants

The study was conducted in the 2016-2017 academic year at Anadolu University, School of Foreign Languages (AUSFL). The programme is delivered in four language levels ranging from Beginner to Intermediate. These levels are determined according to the Global Scale of English (GSL). The students are placed into these levels by means of standardized tests prepared by AUSFL. With class hours ranging from 22-24 per week, AUSFL aims at efficient language teaching utilizing modern methods and latest technology, e.g. by using 13 computer laboratories, computer equipped classes, continuous teacher training on technology and carrying out research. Hence, this research study was designed to explore the use of smart boards specifically in language learning and to foster interactive and cooperative learning among students through smart boards. The participants of the study were six volunteering instructors and their students in their intact classes that were selected through convenience sampling in the Fall Term.

In order to find participants, e-mails were posted to all 150 instructors at AUSFL informing them briefly about the study. The instructors willing to take part were invited to the trainings provided by Smart Board® personnel to equip them with technical and practical skills. A total of a 20-hour training was provided in two sessions. 21 teachers participated in the first training, and

the number of participants was 10 in the second round. Six of these teachers (two male, four female teachers) and their students (*n*=266 students) agreed to participate in the research study signing consent forms. The information about the participants is presented in Table I. with the pseudonyms of the teachers to ensure confidentiality.

Teacher	♯ Classes	Class Level	♯ Students	Duration
T1	2	Intermediate	43	4 hours
T2	2	Starter	44	4 hours
T3	2	Starter	45	4 hours
T4	2	Elementary	49	8 hours
T5	2	Starter	44	11 hours
T6	2	Elementary	41	8 hours

Table 1. Information on participant teachers

All teachers visited the smart board labs with more than one class. There were two classes in intermediate level, four classes in elementary level, and six classes in beginner levels with the exception of pre-Intermediate level due to lack of the volunteering instructors from that level.

These students in Table 1 above were required to attend the lessons prepared by their teachers, fill out lesson evaluation surveys after each session, and answer an end-of-year evaluation questionnaire. All teachers and 23 volunteering students from these classes also underwent a semi-structured interview.

3.3. Materials

The materials used in the study were three smart boards with their facilities and equipment, and the data collection instruments were two sets of questionnaires and a semi-structured interview protocol.

The type interactive white boards used in the study were Smart Board® installed in three different classes. The hardware consisted of a touch-screen with four cameras mounted in the corners that enable the touching facility, a projector, special pens, a mouse and Internet connection. The board had its own software that required an account password. Students were required to login

to use some facilities such as surveys of the software. The board also had a website where teachers all over the world shared lesson plans free of charge.

The instruments used to collect data in the study, i.e. two sets of evaluation questionnaires and a set of semi-structured interview questions, had all a student and an instructor version, which were designed by the research team. Both the lesson evaluation questionnaire and the end-of-term questionnaire consisted of three parts, a demographic information part at the beginning, a Likert-type questions part and an open-ended questions part. There were nine five-point Likert-type questions and five open ended questions in student version of lesson evaluation questionnaire and 13 five-point Likert-type questions and seven open ended questions in teacher version lesson evaluation questionnaire. There were 22 five-point Likert-type questions in both student and teacher version of the end-of-term questionnaires. Both questionnaires were designed to elicit the perceived strengths and weaknesses as well as application areas and suggestions.

To probe further about the perceptions of participants regarding the use of smart boards and possibilities of their uses in language learning, semi-structured interviews were carried out with 29 volunteers (*n*=6 teachers, *n*=23 students). Before using the pre-agreed semi-structured interview protocols, consents to participate and record the interviews were obtained from the instructors as well as the students. These interviews, which were conducted in the participants' native language, were recorded and transcribed for content analysis by the research team. The duration of the interviews ranged from five to 15 minutes, and recording time was 5.2 hours of length in total. The questions focused on usefulness of the lessons, the strengths and weaknesses of (lessons with) smart board, their possible applications in language learning, and the reflections and observations about learning English with a smart board from the students' and instructors' perspectives.

Procedure and Data Collection

Prior to the class visits to smart board labs, the volunteer instructors had received a total of a 20-hour certificate training about the technical and pedagogical aspects of the boards provided by an expert from Smart Board® company. These trainings were video-recorded for future consultation and shared with the participants.

The instructors were asked to conduct at least four lessons in one term with each of the participating classes, in which case a class hour is equivalent to 45 minutes. The teachers were not assigned any skill or subject so that they could cover a broad variety of skills and activities. While some teachers used the smart boards to support the textbooks used in AUSFL, some intended to use it as an independent material to add variety. Therefore, classroom activities varied from vocabulary, grammar, reading activities to mixed ones.

After each class session, the instructor and the students filled in the lesson evaluation questionnaire. When the term finished, the students and teachers completed a retrospective end-of-term questionnaire to reflect upon their impressions about lessons with smart boards. In addition, volunteering students were interviewed at the end of the term while the instructors were interviewed shortly after the term ended. 12 male and 11 female student participants were interviewed, five of whom were from Intermediate level, eight from Elementary level, and 10 from beginner level.

Data Analysis

After the implementation of the lesson plans with smart boards, a total of 260 lesson evaluation questionnaires and 213 end-of-term questionnaires were collected from students, while the instructors answered only end-of-term questionnaires. The students who completed lesson evaluation questionnaire but didn't fill out end-of-term questionnaire were eliminated from the analysis part. The end-of-lesson questionnaires could not be completed thoroughly by the teachers due to their workload. Therefore, they were excluded from the data analysis part.

The Likert-type questions in the questionnaires were analyzed by means of descriptive statistics via SPSS. The content analysis of the open-ended part in the questionnaires and semi-structured interviews were carried out by two separate researchers to determine the emerging themes regarding students' and teachers' perceptions on the use of smart boards in their language classes. Following the first analysis, the emerging themes identified by both researchers were co-referenced to detect the shared ones.

Results

In this section, the results are presented based on the research questions, and each question is analysed in detail based on the data obtained.

Perceptions of students

In order to answer the first research question (*What are the perceptions of the students at AUSFL on their use of smart board in their language classes?),* the open-ended questions in the students' end-of-class questionnaire, the Likert-type responses from students' end-of-term questionnaire and the interview results were examined. The results gathered from the data were classified into two broad categories: positive comments and negative comments.

The positive comments revealed three broad categories about the use of interactive boards in language learning classrooms, which are fun and variety in the lessons, informative lessons, and participation and motivation in the lessons. The first and most favourable comment was the smart boards' being fun and bringing variety in the lessons. The participant students appreciated both the fun element of interactive boards and their variety in instruction. The participants stated that they not only learned but also had enjoyable time during the lessons. These tools are interactive and allow high student participation, so they increased students' motivation and created an enjoyable learning context. The audio and visual features of interactive boards were also perceived to be interesting by the students. In short, the fun element of interactive boards was the most frequently stated feature of what student participants liked most with the interactive boards. Below are some extracts indicating the students' responses to the interview questions and questionnaires regarding the "fun and variety" theme:

"It was very effective and enjoyable. We did the lesson faster." (Student 7)

"For me, what I learned in that lesson was more lasting; there was competition like in a race since there were games, so it was more ambitious, enjoyable and lasting for me." (Student 11)

"I think it increases participation. I didn't normally participate in classes, but I started to participate in that lesson since it was fun." (Student 21)

In addition, Figure 1 below also represents the participant students' perceptions on the use of smart boards based on studied skills. As can be observed from the table, vocabulary received the highest amount of approval among other skills, which means that implementing vocabulary activities with the use of interactive boards was seen more enjoyable. This is followed by speaking, grammar and listening, all of which were also regarded to be fun, and this finding as mentioned above can also be detected in the qualitative data. However, writing and reading were found to be less favourable among student participants.

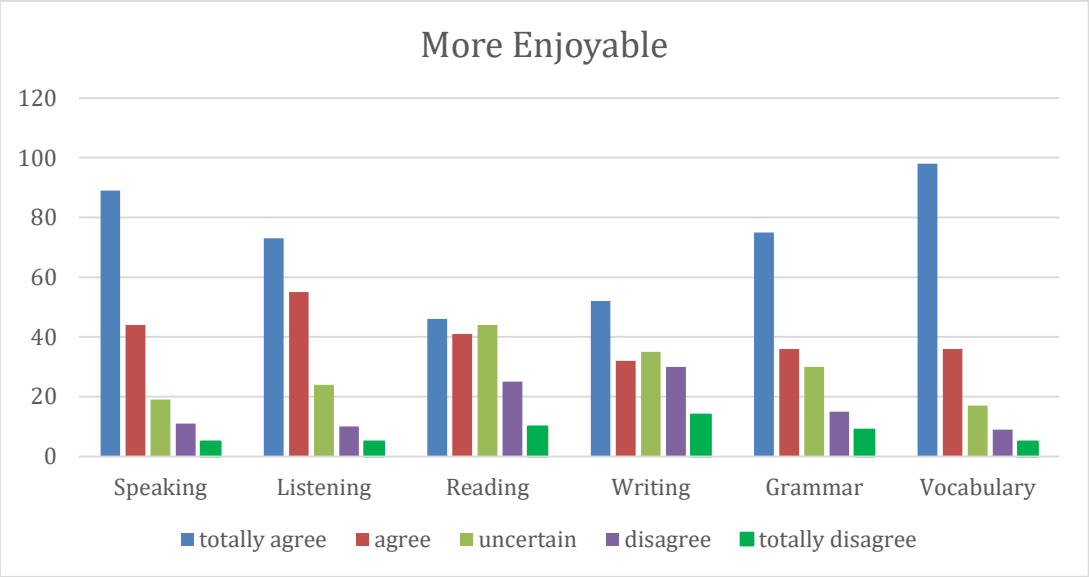


Figure 1. Students' responses on six different skills in terms of being enjoyable

The second prevalent emerging theme was the lessons' being informative thanks to interactive boards as the learners considered the use of this innovative technology as an enhancement of learning and retention. The sample responses of participant students below show their opinions:

"Yes, it was enjoyable and informative at the same time. It was fast; going through the screen instead of writing on board was nice. I like it." (Student 13)

"Not everyone can understand from the book but it is easier to understand in this way." (Student 5)

"For example, if we learn 10 words on smart board but we learn 15 in our regular classes, there is a difference in timing but it is more lasting on the smart board." (Student 16)

Figure 2 below indicates the students' responses regarding the efficiency of smart board use in different skills, which was parallel with the responses to the relationship between smart board use and lesson's being enjoyable. It can be said that there is a positive correlation between the students' perceptions of the effectiveness of the lesson and its being fun. That is, vocabulary remained as the utmost effective skill, which was followed by listening, grammar and speaking while reading and writing were the least effective ones.

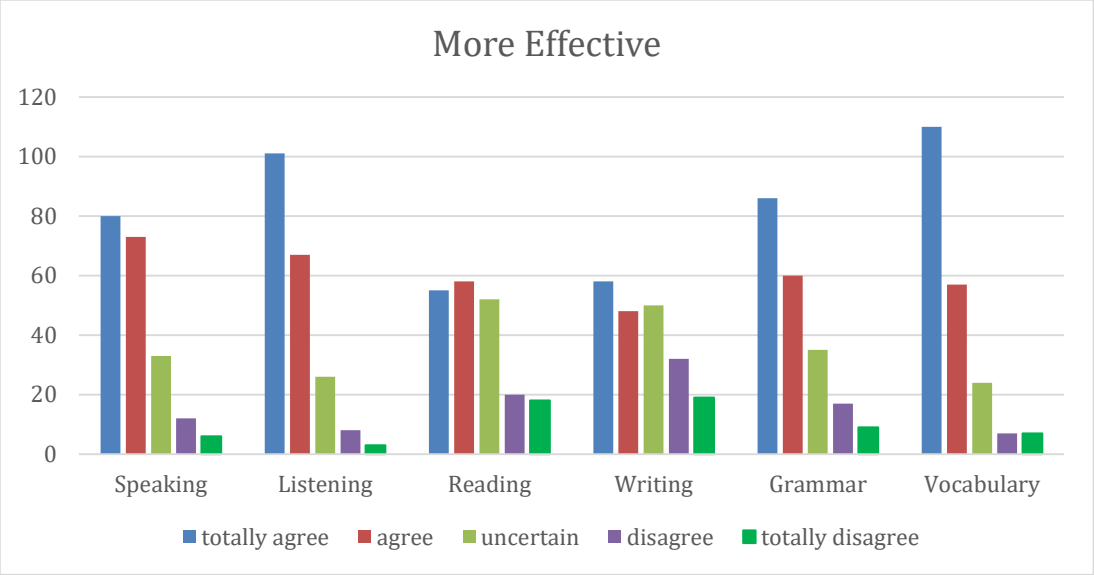


Figure 2. Students' responses on six different skills in terms of effectiveness

Third, the participants pointed out that because of the features of the interactive boards appealing to the different senses of students and the nature of activities requiring group work and competition, the students were more active during the lessons than they were in the mainstream classes. The tools and applications utilized in the classes also helped them to become motivated on the lesson and created an encouraging learning environment for students. Here are some responses concerning participation and motivation:

"More people participated in the lesson, we were more active." (Student 7)

"For example, when the teacher asks a question, instead of asking students come to the board and write the answer one by one, if there is a game with blanks and right answers on board and students come and match them one by one, it will be more enjoyable for a student and class participation will increase" (Student 3)

"For example, we can learn the lesson interacting with mobiles; it is good from this aspect. For example, coming to the board makes students nervous; instead of this, being able to do something while sitting relieves students. It is good from this aspect…" (Student 14)

The negative comments that emerged from the student participants' comments, on the other hand, can be categorized into two main groups: technical and time related issues. Some of the participants indicated that using this technology might have a variety of drawbacks because they might face some technical problems during the implementation of the lessons. Besides, a number of participants thought that lessons conducted in this way were time consuming and they preferred the conventional lessons to the lessons with interactive boards. As can be seen in the following extracts, they stated that those problems led to waste of time and boredom:

"Electricity, when there is a cut off, it causes trouble; you start over." (Student 8)

"I think smart boards might cause problems with time management. For example, we have three smart boards in our school and we have to change the classroom to use smart board, or even if we are in the classroom equipped with smart board, some of our teachers might not be competent enough to open the necessary application for that lesson…." (Student 3)

Perceptions of teachers

The second research question "*What are the perceptions of the teachers at AUSFL on their use of smart boards in their language classes?*" aimed to find out the participant teachers' opinions on the use of these technological devices in their language classes. To be able to answer this question the Likert-type responses from teachers' end-of-term questionnaire and the interview results were examined. Similar to the results derived from the students' interview and

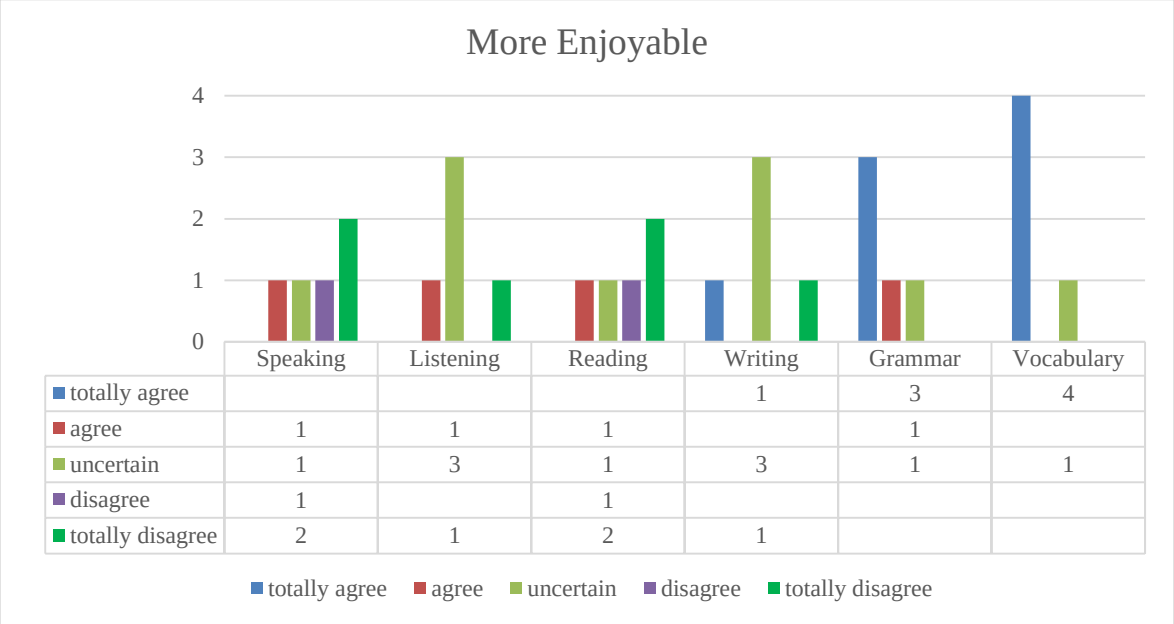
questionnaires, the results gathered from the teachers' data were categorized into two as positive comments and negative comments.

As for the positive comments, two broad categories about the use of interactive boards in language teaching classrooms, which are fun and variety in the lessons and participation and motivation in the lessons, were manifested. The first and the most frequent comment was the smart boards' being fun and bringing variety in the lessons. Like the participant students, the teachers valued not only the fun element of interactive boards but also their bringing diversity into the instruction. The participant teachers affirmed that their learners both learned and enjoyed the course during the lessons with smart boards. In addition, since interactive boards allowed students to use their cell phones in the classroom and the use of language games employed by the teachers created a competitive environment, they are thought as beneficial pieces of equipment for language classrooms. The participants also expressed that one of the mostly favored aspects of interactive boards was their feature to provide a wide range of instructional opportunities resulting in a more effective teaching and learning environment integrating the technology into teaching as a source of variety and richness. The participant teachers recognized this while teaching with interactive boards. Below are some extracts indicating the participant teachers' responses to the interview questions and questionnaires:

"…I have observed that when we meet students with *interactive environments*, they are much more *motivated* in the lesson." (Teacher 3)

"…when you integrate technology and their [students'] cell phones into teaching *interactively*, it always appeals to students." (Teacher 2)

"…just as you don't use the same methods in order to *add novelty to the lessons*, the interactive boards are also the tool you need to incorporate in the lesson." (Teacher 1)



	Speaking	Listening	Reading	Writing	Grammar	Vocabulary
totally agree				1	3	4
agree	1	1	1		1	
uncertain	1	3	1	3	1	1
disagree	1		1			
totally disagree	2	1	2	1		

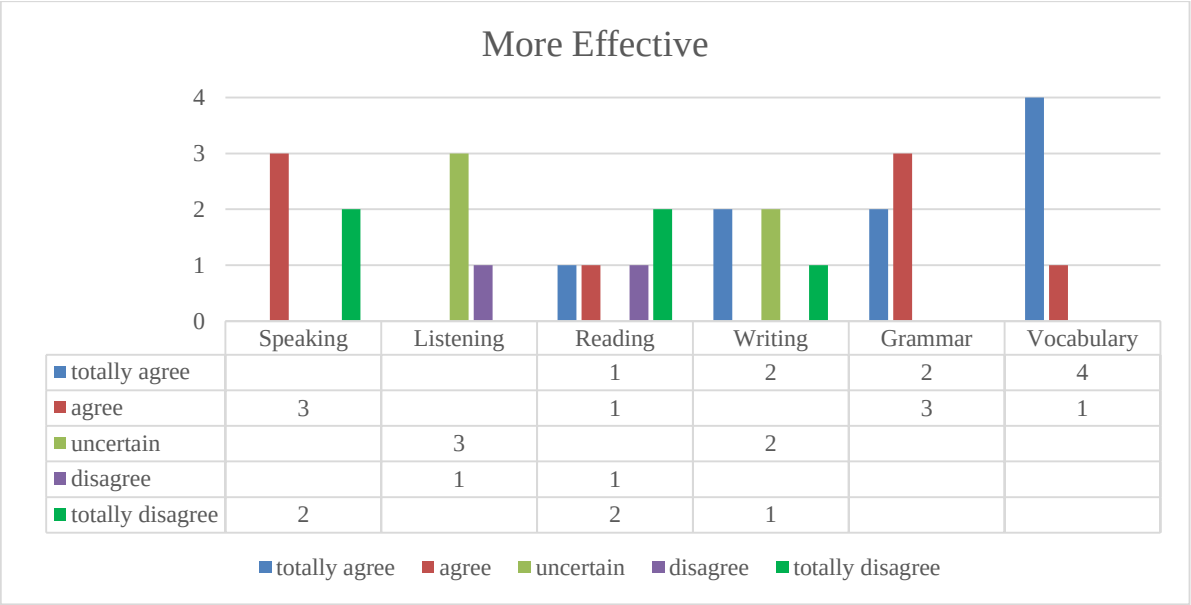
Figure 3. Teachers' responses on six different skills in terms of being enjoyable

Figure 3 demonstrates the teachers' opinions on whether using smart boards was enjoyable or not, and the results showed a similarity with the opinions of students' regarding the most enjoyable skill, which was vocabulary, followed by grammar. Although reading was still regarded as the least joyous skill as indicated by students similarly, the same number of teachers specified that speaking as well as reading was assessed as the least fun skill.

The second emerging theme that the participants pointed out was the positive effects of using smart boards on the high participation and motivation in foreign language classrooms. In like manner to the student participants, the teachers specified that since these devices appealed to different senses and the nature of the various and engaging activities motivated and led them to participate in the lessons, the learners were more motivated than they were in the mainstream classes. The teachers remarked that the use of the smart boards increased the retention of the previously taught subjects and, thus, boosted the student participation and stimulated them better. The following responses display the teachers' opinions:

"…a different classroom, a different environment and a different learning way appeal to students and it motivated them to learn." (Teacher 5)

"…when you make students study with interactive boards with a partner, they participate in the lesson more interactively, both mentally and physically." (Teacher 3)



	Speaking	Listening	Reading	Writing	Grammar	Vocabulary
totally agree			1	2	2	4
agree	3		1		3	1
uncertain		3		2		
disagree		1	1			
totally disagree	2		2	1		

Figure 4. Teachers' responses on six different skills in terms of effectiveness

When Figure 4 was examined, the results of the teachers' perceptions on the use of these interactive boards in teaching various skills were similar to the students' perceptions. That is, teaching vocabulary was regarded as the most effective skill among others. Yet, reading was graded as the least effective skill, which may be a result of the number of courses taught by teachers. Namely, the number of reading classes carried out during the term might be less than the other skills, and this might have had a negative impact on the responses of the participants.

On the other hand, the technical problems faced by the teachers during the use of smart boards were the biggest and the only problem they experienced. These problems derived from two reasons. Firstly, the participant teachers thought that interactive boards were complicated tools and needed delicate maintenance and tuning. They expressed that whenever they used the interactive boards, they had to do fine tuning which resulted in loss of time. Secondly, the participants also mentioned that they were not competent enough to do these tunings and adjustments and they did not know what to do because the interactive boards are complicated devices. Below are some of

the negative comments of the participant teachers about the technical problems in using interactive boards:

"…interactive boards are *overly technological* tools…I would spend the first 20 minutes of the lesson for tuning. I would even go to those classrooms during the breaks to do the arrangements." (Teacher 5)

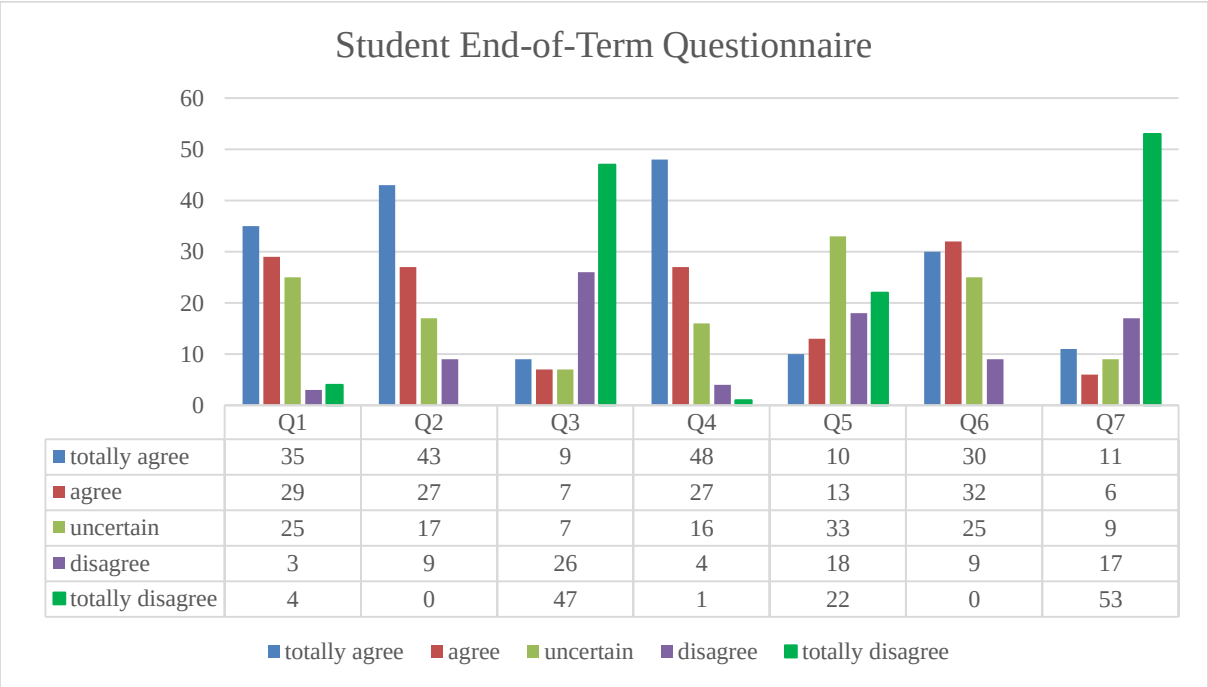
"…You need to *plan your lessons very carefully*…because the use of interactive boards doesn't allow you to improvise. In case of an unexpected technical problem, you have to have a plan B." (Teacher 3)

"…if an effective *training* is not given, I think most of our colleagues will have *technical difficulties*…the reason why I personally did not have serious technical problems is that I am very interested in these tools and I had used them and watched videos about using these tools prior to this project." (Teacher 1)

Suggestions of students and teachers

In order to better understand the suggestions of both students and teachers on the use of smart boards in language classes, the third research question *(What are the suggestions of both the students and the teachers on the further use of smart boards in language classes at AUSFL?)* was inquired. The responses of 213 participants to the end-of-term questionnaires and the semi-structured interviews conducted with 23 students and six teachers were analyzed.

As for the students' suggestions, the first data tool the questionnaire, displayed that overall the participants were happy with the use of interactive boards in their classes, and had a positive attitude towards it, thus suggested using these smart boards in language classes (See Figure 5).



	Q1	Q2	Q3	Q4	Q5	Q6	Q7
totally agree	35	43	9	48	10	30	11
agree	29	27	7	27	13	32	6
uncertain	25	17	7	16	33	25	9
disagree	3	9	26	4	18	9	17
totally disagree	4	0	47	1	22	0	53

Figure 5. Student end-of-term questionnaire

For the first questionnaire item, which inquired whether the students wanted to be taught all the classes using smart board technology, most of the students chose the responses either *totally agree* or *agree* though some participants were uncertain. The second question investigated whether classes taught using smart boards were more effective than the classes with projections, and a greater number of students agreed with the idea. The third question, which stated "Using smart board in classes is not necessary", supported the responses to the first question as the results showed that majority of the participants totally disagreed. As for the fourth and the seventh questions examining the effects of using interactive boards in language classes on the participants' motivation, the results displayed a very positive attitude towards the use of these smart boards. The fifth and the sixth questions asked about the technical problems and their effects on language learning.

As can be seen in Figure 5, the responses vary. Some students were uncertain with the idea of using smart boards since it hindered language teaching due to technical problems. On the other hand, the majority agreed with the sixth question and taught that despite technical problems, using smart board is beneficial.

The analysis of the interviews with the students revealed two primary suggestions, which were related to the results of the questionnaire to a certain extent. The first and the most common suggestion was to use smart boards to integrate alternative teaching and learning activities such as watching videos and films in the class as well as doing speaking practice. In this way, they claimed that they would have the chance for more oral production in the follow-up activities such as presentation tasks, etc. The following excerpts reflect their opinions:

"We can watch videos although we have DVD parts [meaning DVD units in speak out series] but different ones…." (Student 13)

"... for example, we could have watched films in some lessons…" (Student 22)

"… short English TV series at our level, students can watch, short TV series lasting ten minutes etc. For speaking, for listening, students can record their voice and listen to themselves" (Student 20)

"Maybe, we sometimes present our homework in class, we can do this on smart board in a better way or we can do our presentation on smart board in a more enjoyable way like teachers did." (Student 11)

"Actually, there are speaking applications in smart devices, and that kind of a speaking activity could be done with students, like we do on our phones" (Student 16)

"For example, in a speaking activity, I think we could have talked to different people in another class via smart board, or when two groups are in different classrooms, in a game played on smart board, a competitive environment can be created." (Student 3)

Since the participants were content with the use of smart boards in their classes and mainly displayed a positive attitude towards it, the second suggestion coming from the students was to extend the system of using interactive boards in language classes to the whole school by equipping the classes with smart boards.

"I suggest that other classes should use it to prevent inequity." (Student 15)

"Of course it is possible, it is not difficult to use smart boards. People like it and especially students are enthusiastic about these topics; they want to use it and participate actively when they see it." (Student 18)

"It should be extended, it is good that other students benefit from it and their opinions are taken into consideration." (Student 19)

"As I already said, this system could be extended to the whole classes. For both teachers and students, it can be a better system; it can be more beneficial." (Student 22)

"My suggestion is to install it in all classes." (Student 7)

"As a further suggestion, we should keep up with the new age, so we should use smart boards. When we use smart boards, we can adapt to upcoming technology better" (Student 8)

"I think it should be extended, really, to universities, even to high schools." (Student 9)

Moreover, some students focused on the need for more information on the use of smart boards, which was in line with the teachers' opinions of receiving extended training on the use of these boards. Sample responses are presented below:

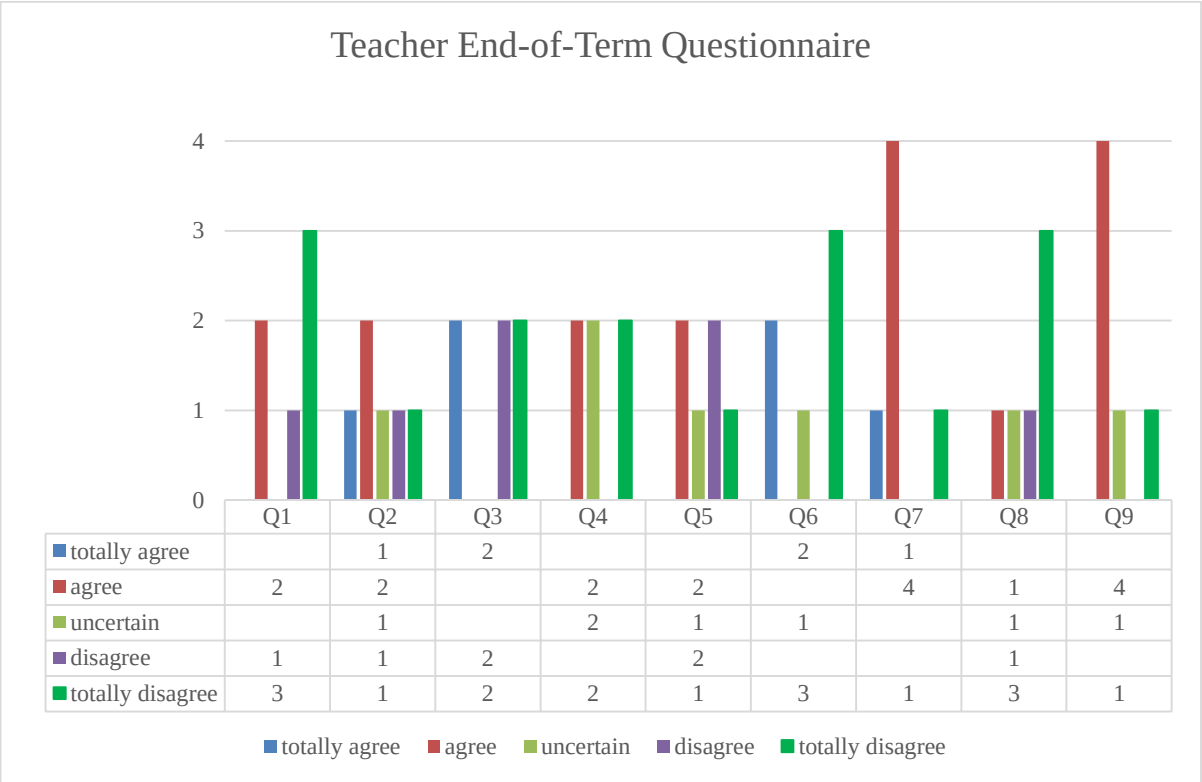
"I think teachers should be given a training; teachers' knowing how to use smart board is good and prevents waste of time in lessons." (Student 3)

"I don't know what else could be done using smart board but teachers can search about this… and I'd like to know more about it as a student." (Student 17)

In brief, as can be interpreted from the results of both questionnaire and the interviews, the student participants displayed a very positive attitude towards these technological devices and believed they facilitated language learning and increased the learners' motivation. In a similar vein, extending this system to the whole school by equipping each class with a smart board was suggested by the participants.

As for the teachers' suggestions, the answers to the questionnaire were slightly different from the students' replies. To begin with, the first question, which examined whether the teachers wanted all the classes to be taught using smart board or not, half of the teachers disagreed with the

idea whereas two of them agreed and one was uncertain. Only two teachers agreed, and the other four participant teachers replied disparately from each other to the second question, which asked whether the classes taught using smart board were more effective than the classes with projections. The responses to the third question, which was closely related to the first one, showed that more than half of the teachers believed that using smart boards in classes was necessary. As can be understood from the answers of the fourth question in Figure 6, the teacher participants had different opinions on the training on smart board use. While two of them thought that the training on the use of smart boards was enough, half of the rest were uncertain, and the other half totally disagreed. Similarly, the responses to the fifth question varied, and teacher participants chose mostly either disagree or agree in the questionnaire with the idea to receive more training. The focus of the sixth and eighth questions was on the technical problems while using interactive boards. Overall, fewer teachers showed positive remarks on the use of these interactive boards in language classes owing to technical problems. Although half of the participants totally disagreed with the possibility of facing problems while teaching by using smart boards, two teachers agreed with the idea and one remained uncertain. In addition, half of the teachers totally disagreed with the eighth question, which inquired whether using smart boards was beneficial in spite of technical problems. The rest of the teachers' answers changed disparately, yet the majority was not content with the use of smart boards because of the technical problems they faced. For the seventh and ninth questions, enquiring the effects of the use of these interactive boards on learners' motivation level, reverse answers were observed. Specifically, the answers revealed a positive attitude to the seventh question and a negative attitude to the ninth question. For the seventh one, all participants selected the alternatives either *totally agree* or *agree*. On the contrary, the answers to the ninth question displayed that four teachers believed using smart boards affected the attitude towards foreign language learning negatively whereas one participant was uncertain and another one totally disagreed.



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
totally agree		1	2			2	1		
agree	2	2		2	2		4	1	4
uncertain		1		2	1	1		1	1
disagree	1	1	2		2			1	
totally disagree	3	1	2	2	1	3	1	3	1

Figure 6. Teacher end-of-term questionnaire

The data driven from the interviews with the teachers revealed that the teachers came up with two main suggestions, namely, having training on smart boards and preparing a material bank, the first of which is closely related to the results gathered from the questionnaires. All participants appreciated the training prior to the implementation of the project. Although the time allocated for the training seemed to be enough and the trainer from the responsible company was competent, they stated that they need a different type of training tailored for language teachers teaching to young adults at tertiary level. In other words, they expressed a need for a more contextualized training. The following responses reflect their ideas:

"If this type of education is to be disseminated, we need a more comprehensive training than we had; a training specific to us…even if the trainer was competent." (Teacher 1)

"We need a language teaching training at the tertiary level…the examples from mathematics teaching were not appropriate. Therefore, I had to a search on [how to teach English with interactive boards]." (Teacher 1)

"Program setting is a big deal. I don't know the delicacy and details of it. I don't know the timing." (Teacher 1)

"We had training but it is difficult to become practical in using these tools…" (Teacher 5)

"They [interactive boards] have a lot of technical features. They may be useful for mathematics or science lessons but they have nothing to do with us." (Teacher 5)

"Installing interactive boards is not enough. Maintenance is also an issue. Apart from it, [you need to know] what to do in case of a power cut, virus ware or a software problem…" (Teacher 3)

In addition to the first suggestion, having training on the use of smart boards, the second suggestion offered by the participant teachers was to create a material bank for the other teachers. The teachers stated that preparing a lesson plan for each lesson to be conducted with interactive boards took a lot of time and effort. This was one of the main concerns of the teachers regarding the use of interactive boards. The participant teachers thought that neither the applications existing in the activity bank of the interactive boards were specifically applicable for language teaching, nor did the training they took prior to the implementation of the project prepared them to do the lessons for language teaching. Therefore, they mentioned that if this piloting implementation was to be disseminated to the whole school, it is imperative that an activity bank or material bank be prepared in advance. This might help eliminate the problems they faced, and the other teachers will not have to spend a lot of time preparing the activities. They also pointed out that if teachers share the activities that go well with language teaching, it might be a good implementation to make the most of these tools. The following excerpts show their responses:

"If we could go on [using interactive boards] as a specific group and could organize those activities, we could have had an activity bank. Then we could have had a good collection [of activities]." (Teacher 1)

"Unfortunately, most of the language activities in the bank of the interactive boards were for the primary school students…different activity types could have been prepared for each lesson; the activities to achieve our own outcomes." (Teacher 1)

"We could have prepared *a* material pack for interactive boards just as we have our own supplementary packs for our lessons…Using interactive boards is really good, but preparing a three-minute activity may take two hours even if it is so enjoyable..." (Teacher 5)

"It is easy for teachers to teach verbally, but when you plan the lesson with the interactive boards, this is really a cumbersome job. For this reason, a group of people may prepare a technological pack for interactive boards… We could have a software pack…" (Teacher 5)

"We could have feedback from the people [about the activities]; they [teachers using interactive boards] could explain us how to use them." (Teacher 3)

In sum, the responses given to the questionnaire and the interviews above indicated that the teachers believed that using smart boards in classes was necessary although they had concerns on the use of these interactive white boards in language classes owing to technical problems. The participants expressed that they had difficulties either with the technical problems or with how to adjust the software for language teaching since it is mainly designed for other disciplines such as science and mathematics. They needed further training on making necessary adaptations on the settings of the interactive boards to make them more applicable for language teaching. Moreover, even if the lessons conducted with interactive boards were joyous for both the teachers and students, it took great time of teachers to prepare them. Therefore, in order to lessen the workload, the teachers proposed to prepare a material bank for the use of interactive boards if they are to be used by the whole school.

Discussion and Conclusion

This study tried to explore the perceptions of the students and teachers in AUSFL on using smart boards in learning English. The results suggested that both teachers and students enjoyed using interactive boards in the class and these lessons were fun. They also stated that students' participation and motivation increased in the classes where smart boards were used. This finding is parallel with the findings of Troff and Tirotta (2009) who discovered that not only did they increase the level of attention paid by students but also teachers were eager to employ them. Most of the teachers and students felt positive about smart boards in English teaching. They specified

some drawbacks as well such as technical problems and time management issues, which is akin to the findings of Somyurek, Atasoy and Ozdemir (2009) in their studies on the use of smart boards in Turkey, in which technical problems lowered the level of efficiency of smart boards.

As mentioned earlier, the attitudes and views of students are among the widely-investigated areas of study. This study looked into the perceptions of the students on the use of smart boards in their English classes. The results showed that almost all students mentioned their positive views in the interviews, open-ended questionnaire parts and Likert-type questions focusing on the inclusion of smart board into their different skill-focused classes by commenting on the effectiveness and joy criteria. These results were in line with the previous ones (Gursul &Tozmaz, 2010; Manny-Ikan, Dagan, Berger-Tikochinski, & Zorman, 2011; Mathews-Aydınlı & Elaziz, 2010) which mention that learners feel positive about the lessons in which smart boards are used, and teachers observed that their lessons were more effective. However, when each language skill area is considered individually, it is not rational to reach a clear-cut conclusion due to the time allocated for each session. Although the teachers were informed that they were expected to have a certain skill focus in each class such as reading, listening, etc., they were still not able to carry out similar number of classes for each skill; thus, generalizing the results is not possible. Nevertheless, results on the relationship between speaking and reading skills and smart board use are comparable with the previous studies in terms of learners' positive perceptions.

The final point related to the suggestions of students' and teachers' present that the suggestions of the students showed their positive views on smart board use by advocating the implementation on their use in the whole school system to integrate various teaching and learning activities. This can promote their oral language productions, which can also be linked to the increase in cooperation among learners (Schmidt, 2008). The teachers' suggestions revealed their concerns on time constraints and training as they suggested receiving a more need tailored and contextually appropriate training for language teaching and creating a material pack. Both of these suggestions can help the teachers to lower the time allocated for material preparation and to deal with the technological problems more effectively. This conclusion was also indicated by Erduran and Tataroğlu (2009), Momani et. al. (2016) and Guerrero and Velastegui (2017), who argued that

lack of enough technical training discourages teachers and deters them from using smart boards by switching to traditional teaching methods.

Despite the concerns about technical issues and time constraints for lesson preparation, it can be concluded from this study that both teachers and students believe that using smart boards might make language learning more enjoyable and effective, primarily during vocabulary and grammar teaching and also in the teaching of listening and speaking skills.

The use of smart boards attracts an inceasing interest in the field of educational technology. Further studies can employ a longitudinal approach by including more participants for empowered results. Studies can also focus on classroom observations to pinpoint strengths, weaknesses, opportunities and good practices while teachers are using IWBs in their classes. Moreover, action research designs can be utilized modifiying and adapting the teaching conditions and activities in foreign language classes in a cyclical manner. Further studies might also consider experimental designs to assess the effectiveness of IWBs in teaching.

In this study the teachers received 20 hours of training. For more effective and full use of these technological devices, teachers might need longer hours of training which is accompanied with technical and material-based support as well as guided hands-on practice. Therefore, further research can investigate the effects of providing more in-depth training of using smart boards. Finally, this study was carried out with EFL learners and teachers. Further studies can be conducted with teachers and learners of other languages.

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