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The interference of the Arabic prepositions in the Emirati English

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Abstract

The bonds of England and the UAE date back to over 220 years ago. This article explores the interference of Arabic prepositions in the English used in the United Arab Emirates (UAE), and their occurrences in light of gender and level of education, two important social variables related to linguistic behavior. To do so, participants will translate 20 sentences in Arabic into English as well as fill in 30 gaps in sentences in English with the missing prepositions. We will also experiment how musical intelligence may improve Emiratis' performance regarding preposition. An experiment will be carried out to verify if participants from the experimental group, who will receive training on prepositions through music, obtain better results compared to the control group, who will receive training through a more traditional way (by listening to the instructor and repeating).

Key words: multiple intelligences, musical intelligence, grammar, prepositions, L2 acquisition, training, Emirati English, Arabic dialects, autism, savant syndrome

1. Introduction

This study aims to analyze the utilization of the Theory of Multiple Intelligences (MI) as an instrument to enhance learning. MI was presented by the American developmental psychologist and research professor Howard Gardner in 1983 in his notable book Frames of Mind [1] in which he claims that individuals possess eight intelligences (bodily-kinesthetic, musical, linguistic, logical-mathematical, spatial, interpersonal, intrapersonal, and naturalist [2]) and not only one as most psychologists prior to his theory advocated. The focus of this paper will be on musical intelligence.

Musical intelligence is the capacity to perceive the meter, tone, and melody. This intelligence enables us to perceive, create, reproduce, appreciate music patterns, identify differences between musical pitches, among other abilities. composers, pianists, instrument makers, musicians in general, vocalist, and sensitive listeners [1] are examples of musical intelligent people.

This study uses musical intelligence to improve Emirati participants' use of prepositions in English. According to Campbell, L., Campbell, D. and Dickinson, D. [3], there are two main ways to implement musical intelligence in the classrooms: The multimodal and the arts-based models. The first one, more pragmatic is the multimodal model, which uses the multiple intelligences as entry points (i.e., the utilization of learners' strengths - one of the eight Multiple Intelligences - to learn and understand academic content. In the case of our study we will use musical intelligence as an entry point to understand and improve prepositions.) into disciplinary content. Our study makes use of the multimodal model, not because we believe this is the best and most important aspect of musical intelligence, but because we are not policy makers, therefore we cannot implement music classes in schools, which leads us to the other model of schools, the arts-based one, in which Multiple Intelligences are dealt as sound reasons for learning in and through the arts, arts as legitimate disciplines. The fact that the study was carried out in the United Arab Emirates (UAE) also contributes to this multimodal model as this country has only recently been adapting to new methodologies and international schools; moreover, 20 years ago over 90% of schools in the UAE were koranic-based and there were no institutes with music class or music schools available in the country [4].

 doi:10.20944/preprints202102.0512.v1

Research on individuals whose brains have been damaged as a result of a stroke or other sorts of trauma confirm the distinctiveness of musical perception. Some aphasic individuals (a condition in which a person loses partial or totally the ability to communicate or understand language, due to a brain damage) have additionally displayed lessened musical ability while others can suffer significant aphasia and keep intact musical competences, even as one can become musically impaired while still retaining one's principal linguistic abilities. This is because linguistic competences are concentrated in the left hemisphere while musical capacities are located in the right hemisphere. Disease in the right hemisphere may compromise music appreciation. Amusia, for instance, prevents individuals from perceiving or reproducing musical sounds [1, 5, 6]. Because of these evidences we believe that activating one more portion of the brain to learn, in the case of this study the right hemisphere in which musical intelligence is located, will provide better results than just learning using the linguistic intelligence (repetition, reading, listening to the prepositions) which activates the left hemisphere.

Unlike language syndromes, musical syndromes are not uniform, and a great variety can be found even inside the same population. Musical breakdown is not systematically connected with other faculties, such as linguistic, numerical, or spatial processing; music seems unique in this respect, just like natural language [1]. Perhaps once musical competence has been more accurately analyzed, we may find that it is even more lateralized and localized than human language.

Astonishing musical and acoustical feats performed by autistic youngsters have been reported in the literature. The most outstanding musical savant may be Eddie Bonafe, who was the focus of many articles as well as a whole book [7 -12]. Eddie was born in 1980. By the age of ten, he had begun to display the ability to play works at the level of famous composers like Mozart, a good long-term musical memory, and an outstand ability to play music after hearing it just once or twice [7].

This study will carry out an experiment regarding MI. 20 Emirati participants in the experimental group will be trained through music in the domain of prepositions – to examine whether there is a significant improvement in this domain compared to the control group (a group of 20 Emirati participants, who will be trained in a more traditional way: by reading and repeating out loud). The experimental group will be trained with the aid of music, as they will practice the prepositions by singing a song dealing mostly with three problematic prepositions for Emiratis: *on*, *at* and *by*.

It is essential to be aware of the social and linguistic characteristics in the UAE to understand the interinfluence of English and Arabic.

Dubai and Abu Dhabi suffered a massive immigration after oil was found in the region in the late 1950s. Currently more than 89 percent of the population in the UAE is foreign-born [13 –16]. There was an obvious need for international schools, and as a consequence English began being used in most services and public places, such as bars, shopping malls, taxis, gas stations, restaurants, cinemas and grocery stores.

The Dialect is the first language (L1) [17] in the Arab world, more precisely regarding this study, the Emirati Dialect is the L1 in the UAE. The UAE government has invested significantly in the education system in order to keep up with the globalization, changing from instruction in Modern Standard Arabic (MSA) – which is Arabs' second language (L2) [16,17] to a bilingual curriculum where Arabic and English are equally important [18]. Since 1990s, English lessons begin in the first year of primary in public schools [19].

The bonds of England and the UAE date back to over 220 years ago. This study seeks to find out the influences of Arabic in the Emirati English throughout these two centuries as well to discuss the effectiveness of teaching content through music. To do so, the following research questions were discussed:

1. Are there influences of MSA (L2) and Emirati Dialect (L1) in the acquisitions of prepositions in English?

2. Is there a meaningful difference in result among the participants of the control group, who learn through music and the control group, whose participants learn through a traditional method (reading and repetition of the content)?

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3. Are there differences in the results obtained by the participants regarding their educational background and gender?

4. Are the results similar to the ones obtained in our previous study [20], in which the content taught through dance (experimental groups 1 and 2, composed of ballet and flamenco dancers respectively) obtained a statistically meaningful difference compared to the control group (group of participants trained in a traditional way, by reading and repeating the content)?

2. Historical Review

The following historical analysis is intended to explain the three periods of linguistic change in the UAE. According to Schneider's [21] 'dynamic model' of postcolonial English, three significant phases of language change can be identified in the UAE. Initially, the 'foundation phase' (1809 – 1966) when English was introduced; a second period of 'exonormative stabilization' (1966-2004) and the period of 'normalization' (2004 till the present moment). This theoretical framework looks into the structure of Modern standard Arabic and Emirati Dialect and their influence in the Emirati English.

2.1. The foundation period: the introduction of English (1809-1966)

The bonds between the UAE and Britain date back over 220 years. The British had no interest in the Gulf except for the port of Muscat. However, in 1797 this reality changed; British Indian shipping was threatened by Arabs of the lower Gulf. The British Governments of Bombay and India considered the maritime toll-levying and raiding as coercion and piracy. The Qasimi, the ruling family of Sharjah, Ras al-Khaimah (nowadays these are two of the Emirates that constitute the UAE) and Lingah were believed to be behind these raids [22]. In 1809 and 1819 the British sent expeditions to several Qasimi ports, this can be considered the first linguistic phase [21], the 'foundation phase' when locals had the first contacts with English. The bonds the UAE have with England went further when in 1820 the British imposed the General Treaty, which were agreements with individual Emirates resulting in an area known as "The Trucial States", (nowadays the UAE). The Emirates agreed to cede land exclusively to the United Kingdom and to avoid engagement with other governments, unless they were allowed by the British. In return, the British promised to protect the coast and land in the event of an attack. Once Britain accepted the role of protector, the rulers honored their duties and commitments as protégés. Two further treaties in 1888 and in 1892 devolved external relations to the British in return for protectorate status.

These treaties, as well as the Treaty of Perpetual Maritime Peace, signed in 1853, which had been proposed by the Ruler of Sharjah seven years before, led to peace and prosperity along the coast and supported an active trade in high quality natural pearls which lasted until the 1930s. In the early 1930s the first oil company teams carried out geological surveys in the UAE, after they had discovered oil in Iran (1908) and Bahrain (1932). Such discoveries contributed to Britain's decision to continue in the Gulf. After the Second World War, Britain actively promoted the development of all the Gulf Shaikhdoms and Oman. All the oil companies established in the Trucial States were British-owned. Gulf rulers were stimulated to invest their surplus oil income in Britain. They also made the use of aircraft to connect Britain to the Gulf, as well as to protect the latter. The RAF (Royal Air Force) and Imperial Airways, now British Airways had their bases in Sharjah (UAE). In 1941 the British post agency opened its first agency in Dubai. From 1948 on, all mail posted from the Trucial States used British stamps portraying the British monarch. Rules and British officials were heavily criticized by anti-colonialists around the world, including the UN General Assembly. To avoid that, the British government granted more freedom to the rulers. The rulers, however, feared the vulnerability that independence would bring.

2.2. The Exonormative stabilization: English as the language of administration and education (1966 -2004)

In 1966, Shaikh Zayed Bin Sultan Al Nahyan assumed authority in Abu Dhabi and started ruling the Trucial States. The British withdrew all their Troops two years later; however, the British settlers did not leave the area. The exploitation of oil and gas provided work for hundreds of the indigenous population and promoted fast development under the guidance of foreign professionals. In effect, all of the main directors of public works, education, medical

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services were Britons, and the army unit were led by British officers. AS Gulf cities grew, all the facilities, bridges and buildings were designed by British architects and engineers. The British Council was in charge of developing secondary education in most Gulf shaikhdoms and granted university scholarships for hundreds of Gulf students to study in Britain.

Figure 1. Picture of a Mailbox in Dubai, the Red Color of the British Mailing is still Kept.

Figure 2. Trucial States Stamps on an Envelope of a Letter to England.

In 1966, the British decided not to be involved in the Trucial States anymore, which led the rulers of six Emirates (Abu Dhabi, Dubai, Sharjah, Umm al-Quwain, Fujairah and Ajman) to found a Federation. They signed an agreement and on the 2nd of December 1971 the United Arab Emirates was formally established. The seventh Emirate, Ra's al-Khaimah, joined the new federation one year later.

British Prime Minister Edward Heath did two things to ensure the protection of the Gulf after the withdrawal. First, a group to study the problem of defense in the area was established. This group suggested that America be encouraged to expand its military presence in the Indian Ocean. Second, he offered defense by providing British officers to help with military training and leadership. The British political agent in the Emirates was promoted to ambassador. Hundreds of Britishmen stayed in the Emirates as officers and civil servants administrating the police, airports, hospitals, and newly-formed militaries. Many remain there today. In 1988 there were 172 British loan service officers employed by the UAE Government [22, pg. 24.] According to Boyle [23, pg. 319], at the time of independence, the British community comprised a few thousand and nowadays reached about one hundred thousand. English became the lingua franca of the country: it was present in the oil and gas industry, aviation, shipping, commerce, it was the language of the South Asian migrant worker, who comprised a large section of the community. English was regarded as the language of new era for the autochthonous community [24]. The sharp rise in the number of foreigners made that the Emiratis themselves became a linguistic and ethnic minority in their own country. Prior to the invasion of Kuwait in 1990, the non-gulf Arab population, which provided the professional workforce in fields such as education, engineering, and medicine throughout the Gulf, fell from 72% in 1975 to 29% in 2002 [25]. From 1990, these non-Gulf Arabs were replaced by professionals from Pakistan, India and Bangladesh, who eventually comprised 50% of the Gulf workforce [25] increasing the number of English speakers in the UAE. Over one century of treaties with England has left traces in the Emirati Dialect. All the new technology and objects that were introduced by the Englishmen were unknown by the Emiratis, so they adopted many words from English, such as lift, light, glass, cycle (for bicycle) class, finish (meaning to quit the job or to be dismissed from work) and many others.

2.3. The nativization period (2004 until present)

'Nativization is Schneider's [21] contemporary period according to his 'dynamic model' relevant to the UAE. This period is ongoing and therefore, not yet well defined. As per Boyle [23], this third period of Schneider's 'dynamic model' started in 2004 when the Abu Dhabi government launched a diversity of economic plans: high-technology and heavy industry, nuclear power plants and expansion of luxury and cultural tourism. Such projects activated a speedy increase in the number of immigrants from 3.3 million in 2005 to 7.24 million in 2010 [26], i.e., over 89 percent of the present population in Dubai and Abu Dhabi is foreign-born [13 – 16].

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2.4. English as Lingua Franca

English is essential in the present situation in Dubai and Abu Dhabi. It is applied in a vast range of social interactions in most public places and services, such as restaurants, theaters, supermarkets, taxis, gas stations and shopping malls, private health care centers[16, 27] , where Arabic is seldom spoken by the staff. Randall and Samimi [28, pp. 43–44] consider Dubai a relevant city for the analysis of English as a Lingua Franca'. In addition, children start learning English in both public and private schools as early as Kindergarten and is the main language at the university level [16, 29].

Some researches have described the characteristics of English as spoken in Dubai [23, 27, 30, 31]- which is subsumed under either 'Emirati English' or 'Gulf English' - to substantial lexical borrowings from different areas such as religion (eid 'religious festival', Alhamdulillah 'God be praised', Wallah 'I swear to God', Inshallah 'God willing', Mashallah 'What God wishes'), food (biriyani 'spiced rice', Luqaimat 'doughnut', Machboos 'rice with cardamom, cinnamon, and dried lemon.), geographical features (jabal 'mountain', albar 'the desert'), and clothing (dishdasha 'long white robe for men', ghetra 'headscarf for men' abaya 'black cloak for women').

2.5. Studies on prepositions in Emirati Dialect and Gulf English

The literature lacks studies on the prepositions in Emirati Dialect and Gulf English. We could find; however, Ghwaileh's study [32], which focused on errors made due to the negative transfer from Emirati Dialect and MSA while writing in English, revealed that when translating from L1 (Emirati Arabic) into L2 (English) most students encountered difficulties in translating prepositions. For instance, Emiratis literally say in English: 'I eat **from** the restaurant' when they mean 'I eat at a restaurant'. This happens because in Arabic the preposition *min* (from) is used:

أكِل مِن المطعم. Akil **min** almat3m.

This phenomenon occurs because there is a colossal mistake in most English books for Arabs regarding preposition: the most frequent prepositions in Arabic are translated into their main meaning in English. These prepositions are the following:

Table 1: Prepositions in Arabic, Transliteration, and the Usual Translation into English

Arabic	Transliteration	English
في	fi	in
إلى	ilā	to / towards
على	3lā	on
من	min	from
ب	bi	in / with

However, these prepositions not always correspond to these translations. Therefore, it is common to find Emiratis and Arabs in general who have difficulties using the correct prepositions in English. Let us take a look at some other examples:

Emiratis usually say: 'I am **in** my way' when they mean: 'I am on my way'. This happens due to the fact that the preposition *fi* is usually translated as *in*, as we previously explained.

انا في الدرب. Ana **fi** darb I am **in** my way.

There are also cases in which one preposition is absent in English and present in Arabic:

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Emiratis usually say in English: 'The library is near **from** the university', but they mean: 'the library is near the university'.

المكتبة قريبة من الجامعة. Almaktabat qariban **min** aljam3a.

The literal translation is : The library is near **from** the university.

There are some prepositions which are different in Modern Standard Arabic and Emirati Dialect. Ghwaileh's study [32] revealed that when translating from L1 (Emirati Arabic) into L2 (English) most students encountered difficulties in translating the preposition *until*; 7ata in MSA, many times substituted by the preposition لـين liin in Emirati:

I stayed on the farm until the sunrise.

تميت بالعزبة لين الفجر. Tamit bial3izba liin alfajir.

In the dialect version, most secondary students translated this sentence as:

I stayed in the farm to the sunrise.

Next, the same students were given on a different day the same sentence to be translated, but now in MSA version:

تميت بالعزبة حتى الفجر. Tamit biall3izba 7ata alfajir.

Participants in Ghwaileh's study [32] made the same mistake they had made previously in the dialect-version sentence. This means that these Emiratis misuse prepositions when translating both from colloquial and standard Arabic into English due to lack of instruction and insufficient knowledge / input in the use of prepositions.

3. Theoretical Framework

The following literature shows how MI theory and more specifically, musical intelligence have been dealt with throughout the years and their implementation in the UAE and how these theories support this and similar studies.

3.1. Multiple Intelligences: The Brain and Language

Albert Einstein is reported to have started to speak extremely late; however, his initial silence may have made him see the world in a more detailed way. Numerous normal or close to normal children show particular difficulties in the learning of language. In some cases, the difficulty seems to be found mainly in auditory discrimination causing them to misarticulate.

The capacity to decode linguistic messages fast – a prerequisite for the understanding of normal speech – seems to rely on an intact left temporal lobe, thus injuries to, or the abnormal development of, this neural zone generally are sufficient to produce language disabilities. However, if the damage occurs during the first year of life, even if it affects the entire hemisphere of the brain, the child will be able to speak quite well. Early in life the brain plasticity enables language to develop in the right hemisphere, even at the cost of compromising other functions such as visual and spatial that would normally be localized there. Attentive examination of such children's linguistic strategies reveal that they are unique in relation to those of individuals who employ the normal language areas in the left hemisphere. In particular, individuals dependent upon the analytic mechanisms of the right hemisphere proceed almost entirely from semantic information: they decode sentences in the light of meanings of the principal lexical items, while proving unable to utilize cues of syntax. Only those children whose language exploits left hemisphere structures prove able to pay attention to syntactic cues such as word order. Both left and right hemidecorticates are able to understand sentences whose meaning can be inferred simply from knowledge of the meaning of substantives:

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The dog was struck by the jeep.

But only the individual with an intact left hemisphere can decode sentences where the critical difference in meaning inheres wholly in syntactic cues [1]:

The jeep was hit by the bus.

Howard Gardner takes care not to term this capacity as an auditory-oral form of intelligence, given that deaf individuals can acquire natural language.

Many retarded children show and outstanding capacity to master language – mainly the phonological and syntactic aspects – though they may have relatively little of significance to utter. Other rare children, in spite of retardation or autism, prove able to read when they are only two or three. These "hyperlexic" children show, therefore, high linguistic intelligence. The reading is so compulsive that it is hard to stop. Regarding mathematical intelligence, one hyperlexic child studied by Fritz Dreifuss and Charles C. Mehegan could immediately tell the day of the week of remote historical dates, while another showed an excellent memory for numbers.

3.2. Musical intelligence

As explained in the introduction, Musical intelligence is the capacity of the skills used in composing, playing, remembering, feeling and understanding music [1]. People with musical intelligence are extremely sensitive to rhythm and sound. For instance, they can easily distinguish the sound of a Spanish guitar from that of an acoustic one. They think in terms of musical patterns. Individuals who possess high musical intelligence look for patterns in new information in order to increase learning. They also look for patterns in speech and language. They remember things by turning them into lyrics or rhymes. This study is based on using music to make participants remember the right prepositions in English.

3.2.1. Musical intelligence and autism

We have also mentioned the most outstanding musical savant in the professional literature Eddie Bonafe [8-12], who by the age of ten, had begun to display the ability to play works at the level of the Mozart sonatas. Not only does the literature address Eddie's case, but also of many talented musical savants. Another music talent was a child called Harriet, who could play "Happy Birthday" in the style of famous composers, such as Mozart, Beethoven, Verdi and Schubert. Harriet applied her musical intelligence in other ways – she knew, for instance, the personal history of the members of the Boston Symphony Orchestra. At the age of three, her mother called her by playing incomplete melodies, which the child would then complete with the appropriate tone in the proper octave [1]. Thomas Wiggins, widely known as "Blind Tom" [33 - 35] was a famous musician in nineteenth-century America. Wiggins was born in Georgia and was apparently autistic, blind, and probably cognitively impaired. Wiggins was a skilled improviser and composer and, to judge from his performance repertoire, a highly accomplished pianist. His performances expressed his remarkable talents. Not only would he play famous works which posed significant technical challenges, but also works composed by himself, all from a repertoire of several thousand works played by heart upon request. His performances were extremely popular, and Wiggins displayed unusual verbal and physical behavior: walking and spinning around and making uncommon facial expressions [36-38]. Wiggins possessed tremendous musical memory and coordination, he would play back any work upon hearing it for the first time, simultaneously playing two different works (one with each hand) while singing a song, and perceiving all of the notes in complex harmonies. Another example of a blind and with developmental disability and extraordinary music talent is Leslie Lemke. Despite having good memory, the pieces Lemke performs are always short [7].

Autism is nowadays considered a comprehensive disorder rather than a medical problem or developmental disorder as it was classified in the 1940s.

3.2.2. Musical therapy

The literature is filled with research which suggest that listening to or singing songs may provide benefits for people with Alzheimer's disease as well as other sorts of dementia [39]. One study concluded that music interventions may be beneficial for gait, the timing of upper extremity function, communication outcomes, and quality of life after

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stroke [40]. Another study suggests that people with dementia who are in institutional care with at least five sessions of a music-based therapeutic intervention probably relieves depression and improves overall behavioral problems at the end of treatment, apart from improving emotional well-being and quality of life and relieve anxiety [41].

There are some clinics in the world that use music therapy to treat patients with Alzheimer and other dementia. The Mayo clinic in Arizona, Florida and Minnesota (USA) [42] as well as the Spanish association Music Association for Awakening (Música para despertar) [43]. The latter became extremely famous when one of its videos went viral on social and traditional media [44, 45] in 2020. The video shows the former ballerina Marta Gonzalez listening to Tchaikovsky's Swan Lake. As she listens, she recalls the choreography and dances to Tchaikovsky's beat.

The literature is also filled with research of music being used during and after interventions [46,47] to alleviate pain, and preceding medical interventions to relieve uneasiness and discomfort. Not only does musical therapy help human beings, but it may also be beneficial for animals. Kaavan, an elephant in a zoo in Pakistan, was kept 35 years in captivity – being complete alone in the last 8 years. The chief veterinarian at the Leibniz Institute for Zoo and Wildlife Research in Berlin, explained that Kaavan had developed "stereotypical behavior where he swooshes his head and trunk from side to side for hours.". In order to prepare him for his release in December 2020, which comprised a 4,000-km journey in a steel cage, he underwent music therapy in an attempt to tranquilize and motivate him [48,49]. This method is reportedly working. Several songs, genres were played to Kaavan, but Frank Sinatra's 'My Way' was his favorite; it reduced his anxiety and damaging behavior.

4. Participants

20 participants - 10 male and 10 female - were randomly chosen to be the control group. 10 of them have only finished secondary public school. The other 10 have graduated from university or hold a master's degree as well.

20 participants - 11 male and 9 female participants - who answered in the questionnaire (Appendix A) that they have music proclivities, (i.e., they listen to music at least three times per week, they enjoy singing along with music) were chosen to be the experimental group. We would have preferably chosen any musicians such as viola players, pianists, violinists; however, we could not find any to comprise the experimental group. Regarding their level of education, 10 of them have completed secondary public school while the remaining participants hold a university or a master's degree. Participants in both groups aged from 29 to 38.

5. Method

It was investigated if there are any differences in performances between Emirati with music proclivities versus regular participants (students and alumni) when receiving training concerning prepositions. To demonstrate that learning through an individual's strength is more efficient than learning in the traditional way, participants were trained in two separate groups. The data for this part were obtained from six different training sessions, each session lasted 10 minutes. There was a pretest some minutes before the first session [see Appendixes B and C]. Participants had to translate the sentences in Appendix B into English (participants' sheets were black and white, in order to facilitate readers' understanding, Appendix B shows the prepositions which occur only in Arabic in green, that is, there is a preposition in Arabic while there is none in English; the prepositions that occur both in Arabic and in English are shown in red). Appendix C is composed of 30 sentences in English with gaps in which participants must fill in using the correct preposition. Posttest 1 was administered after session three and posttest 2 was administered after session six [see Appendixes B and C].

The training sessions for the control group was developed as follows: firstly, the instructor read the rules regarding prepositions (see Appendix D). Next, participants repeated all the sentences out loud. Thirdly, participants in the control group read the lyrics of the song made exclusively for this study [see Appendix E]. This song deals with the prepositions in context. The lyrics were read without listening to any music.

Regarding the training sessions for the experimental group, the first two steps were identical to the training session for the control group: the instructor read the sentences in Appendix D and them participants repeated them.

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Then, participants sang the song made exclusively for this study [see Appendix E]. The melody used was a karaoke version of the song *like a virgin*, performed by the singer Madonna. A video on YouTube was exclusively created for this training (https://www.youtube.com/watch?v=0_yVbr6kLhw)

6. Results and Discussion

As we mentioned in Table 1 (section 2.5) the most frequent prepositions in Arabic are translated into their main meaning in English. However, these prepositions not always correspond to these translations. Therefore, it is common to find Emiratis and Arabs in general who have difficulties using the correct prepositions in English. Let us take a look at some examples from our sentences from the pretest, posttest 1 and 2 (see Appendix B). Let us start by analyzing the negative transfer of the preposition "from" (*min* in Arabic):

1. انتهي من العمل في 7. (I finish work at 7)

In the case of sentence 1 more than 90% answered I finish **from** work, as the verb in Arabic is *antahi* ***min*** (I finish **from**).

3. 'He is married **from** her', instead of saying 'I am married **to** her'.

Hwa mitazawij **min**ha.

Our study is in line with Ghwaileh's findings [32] as we could confirm the same mistakes shown in his study as well as mistakes regarding other prepositions, which will be discussed below and more in depth in the Results and Discussion session.

11. من زمان وأنا أبا هالشي (I've been wanting this for a long time.)

As the preposition من (min) is generally translated as "from", 92% of participants translated this sentence as "I wait / I am waiting from a long time. No participants used the present perfect progressive to translate this sentence, but present continuous or simple present, instead.

12. اترييني. (wait **for** me)

As for sentence 12**,** most students translated it as "wait me", as there is no preposition in its Arabic version.

The other cases of negative transfer into English will be discussed in the following section.

6.1. Pretest

In order to carry out the pretest, participants had to translate the sentences in Appendix B and complete the text with the correct preposition in Appendix C. The following Table 2. shows all the prepositions *on* extracted from Appendixes B and C. There are twenty participants in each group and ten phrases containing the preposition *on*. Therefore, each phrase can have a maximum of twenty correct answers. Let us analyze the first phrase: on a farm, extracted from Appendix C, sentence number 1. We find under the grid on a farm the number 0 for the control group, which means that no participants completed the gap with the preposition *on*. The same result was found in the experimental group, which also means that no participants completed the gap with the correct preposition. Regarding the next phrase on the island – extracted from Appendix C, sentence 2. - only one participant in the control group filled in the gap with the preposition *on*.

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Table 2. Pretest Preposition on

preposition on	on a farm	on an island	on indepen-dence day	on the bus	on this list	on the phone	في أول من ديسمبر (on the 1st of Dec.)	في التلفزيون on TV	في يوتيوب on You-Tube	عليهم خصم on sale	percentage of correct answer
control group	0	1	6	0	1	9	2	2	0	7	X= 2800/ 200= 14%
experiment-tal group	0	0	4	0	0	10	3	2	0	6	X=2500/ 200= 12,5%

There was a clear preference for the preposition **in** as all participants completed the form by using ***in*** *YouTube,* ***in*** *the bus,* ***in*** *the farm,* ***in*** *an island* (there was also one contestant who wrote Pat is ***from*** *an island* and it was considered correct). Regarding ***on*** *the weekend* (American English), we decided to include it on this list in the British version as "**at** the weekend". Actually, seven participants answered ***at*** *the weekend*. However, the remaining 33 participants answered ***in*** *the weekend*. **In** first of December was also by far the most used preposition, while 3 participants did not use any preposition: "see you the first of December." Regarding **on** sale, the participants either translated it as: *this* jeans *has a discount or this jeans on sale.* Although in Arabic the word jeans appeared also in plural " هالجينزات / **hal**jeanz**at**" – the suffix -at indicates plural – the demonstrative pronoun ***hal*** is used for both singular and plural in Emirati Arabic, meaning this or these. Most contestants also omitted the verb to be (these jeans *are*), as the verb to be in the present tense is absent in both MSA and in all the dialects of Arabic. Two contestants also answered **for** sale, instead.

Regarding the level of education, 49 out of the 53 correct answers were given by participants who hold either a university or a master's degree. In addition, 29 correct answers were performed by females and 24 by males.

Table 3. Pretest Preposition in

preposition in	in different colors	in spring	in London	in the morning	على شارع الخير in/on Khair St.*	في أميركا in America	في الصورة (in the picture)	في ديسمبر (in Dec.)	in the car	in the taxi	percentage of correct answer
control group	18	20	20	20	20	20	17	20	20	20	X=19500/ 200=97,5 %
experimental group	19	20	20	20	20	20	18	20	20	20	X=19700/ 200= 98,5%

Let us now analyze Table 3, which deals with the preposition in. Both **in** and **on** Khair Street were considered correct answers. However, 36 participants opted for the preposition **in**.

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As we can see, Emiratis tend to simplify the prepositions **in, on** and **at** by using only **in** when speaking Emirati English. In the case of ***in*** *different colors*, which is the least usual collocation on this list, three participants completed the sentence with the preposition **at**. In the case of the translation for the sentence "you can see it in the picture", 5 participants translated it as: "You can see the picture", instead. Because we could not encounter problems concerning the preposition **in**, we decided to disregard it in the following two posttests.

Regarding the level of education from the participants, the only eight mistakes were made by participants that do not hold a university degree. Five mistakes were made by males while four were made by female participants.

Table 4. Pretest Preposition at

preposition **at**	at Christmas	at 234 Oxford street	at alramsa@email.com	at the end of the month	at the weekend	at night	في 7 at 7	laugh at	yell at	good at	% of correct an-swers
control group	3	0	9	2	4	7	20	3	2	0	X=5000 / 200 = 25%
experimental group	4	0	11	2	3	5	19	4	2	0	X= 5000 /200= 25%

With respect to the preposition **at** in Table 4, again Emiratis used the preposition **in** in most cases, instead. **At Christmas** was also substituted by the preposition **on** by two participants, maybe because of the collocation **on Christmas day**. With regard to the sentence **I live at 234 Oxford street**, most participants chose the preposition **in** and some did not add any preposition (I live 234 Oxford street). Maybe because many participants were businesspeople and they constantly exchange emails, the sentence "Email me at alramsa@email.com" was correct by more than half of the respondents. Although only one participant omitted the preposition **at** in the sentence "I finish work at 7", 32 participants translated the sentence literary: I finish **from** work at 7, as in Arabic the verb **finish** takes the preposition **from**. However, it is clear that this common collocation *at + hour* is common in Emirati English. The blank "laugh **at**" was mostly filled in by "laugh on", because in Emirati Arabic the expression is يضحك علي.. **/ yaD7ak 3lay,** which literally means ***laugh on me***; some participants also filled in with the preposition from, "laugh **from** me". The sentence "My mom yells **at** me" obtained a similar performance to "laugh **at** me"; again, the preposition in Emirati Arabic is 3la (on) **على**. Nevertheless, most participants left it blank: "My mom yells me." While 3 answered Yells **on** me, translating it literally from Arabic.

With regard to **good at**, all contestants filled in this gap with the preposition **in**, as in Emirati Arabic they would use the preposition **fi**.

From the total of 100 right answer questions obtained in the training of the preposition *at*, 69 were given by participants holding a university or master's degree. 62 of the correct answers were given by female participants.

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Table 5. Pretest Preposition by

preposition by	by preparing for it	go by metro	by mistake	by chance	by credit card	by Shakespeare	by my side	by myself	by 5 pm	by the lake	% of correct answers
control group	0	11	13	15	6	13	12	13	4	2	X=8900 / 200 = 44,5%
experimental group	0	13	13	15	4	14	11	14	3	1	X= 8800 / 200 = 44%

As it is shown in Table 5, there are some phrases that were known by more than half of the participants while others were little known or unknown at all. Regarding sentence number 11 [see Appendix C] "you can pass the exam **by** preparing for it", most contestants left it blank. Five completed it with the preposition **from,** four with the preposition **since** and three with the preposition **at**. "Go **by** metro" was the preferred answer although many opted for the phrase "go **in** metro".

With regard to sentence number 15 **'By** mistake', extracted from Appendix C, in Arabic it is expressed by the preposition **bi,** which is mainly translated in English as ***with.*** One participant instead of filling in the blank added the letter -n to the noun mistake, which resulted in the sentence: 'she did it mistaken'. Other filled it in either with the indefinite article "a" (She did it a mistake), or with the pronoun "another" (She did it another mistake). Two participants completed the gap by using the preposition "for": She made it for mistake. The collocation ***by chance*** also takes the preposition **bi** in Arabic: **Bi** SSidfa **بالصدفة**, which is pretty close to the MSA variant **bi**SSudfa. It seems that this expression is widespread among Emiratis and maybe because by in English and bi in Arabic are similar, participants have assimilated it well. Two participants, however, left it blank.

The phrase "pay **by** credit card" was mostly completed with the preposition **with**. In Arabic "by credit card" would be "bi bitaqa / **ببطاقة**". Both the prepositions *bi* / **ب** and *m3* / **مع** are mainly translated into English as *with*.

Regarding phrase number 19 'written by Shakespeare', in MSA no preposition is required as verbs in MSA have an exclusive passive form. Arabic dialects, however, do not express the passive in the same way, in the Emirati Dialect it is expressed by the preposition *3n* **عن** which usually means *"about"* in MSA. When comparing in Emirati Dialect, I am taller than you, for instance, Emirati dialects allows two prepositions; ***3n*** or ***min***; ***min*** is the equivalent of ***from*** in both Emirati and MSA. That is, in some structures both ***3n*** and ***min*** are interchangeable, being *min* the equivalent of *from* in most cases. Although more than the majority chose the correct preposition (written by Shakespeare), the ones who were wrong opted for *written **from** Shakespeare*, which might have been an influence of the preposition ***3n*** or ***min*** in the Emirati Dialect.

Sentence 24 "His house is by the lake" was mostly filled in as "near the lake"; however, the preposition near had been given as an example: *24. His house is ____ the lake. (that is, near the lake)*. Therefore, we disregarded the answer "near" as correct. Seven participants also filled in the blank with the preposition **close**: His house is **close** the lake, but no one filled in with the alternative preposition **close to**.

The expression in sentence 21 'by my side', which exists in MSA is simplified in the dialect by "***wiaai*** / **وياي**", which literally means *with me*. However, the expression 'by my side' is recurrent in English and over 50% of participants chose the correct answer. Yet, the remaining participants chose the collocation "on my side", which is also correct in English, but it has a different meaning - moral support instead of being physically beside someone.

We have decided to leave out this preposition from the song, so that we can observe if there is a homogenous improvement in both groups throughout the training. Only the collocation by the lake was present in the song of the experimental group. This collocation is expected to obtain better results compared to the remaining 9 collocations.

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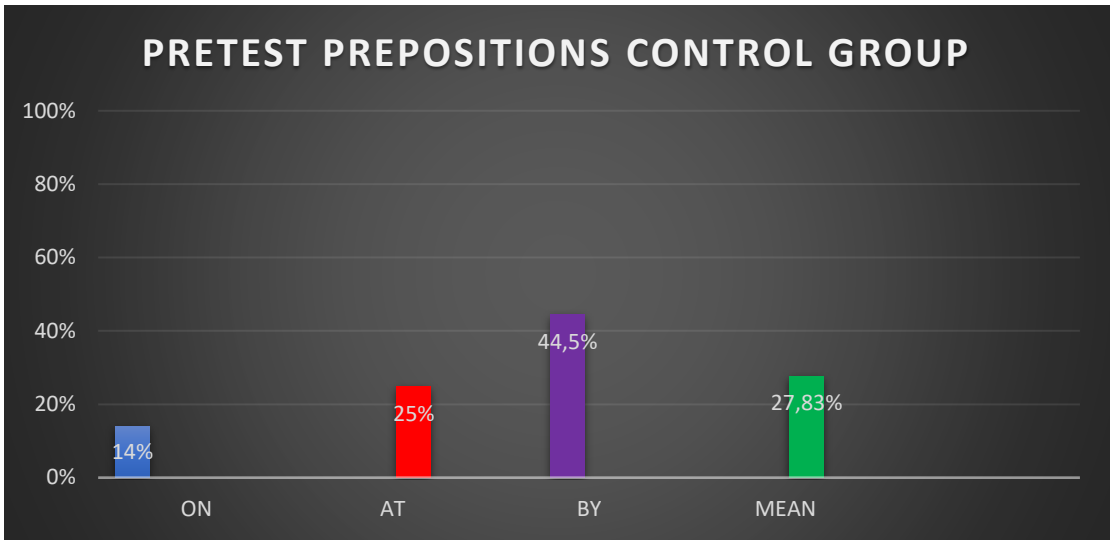
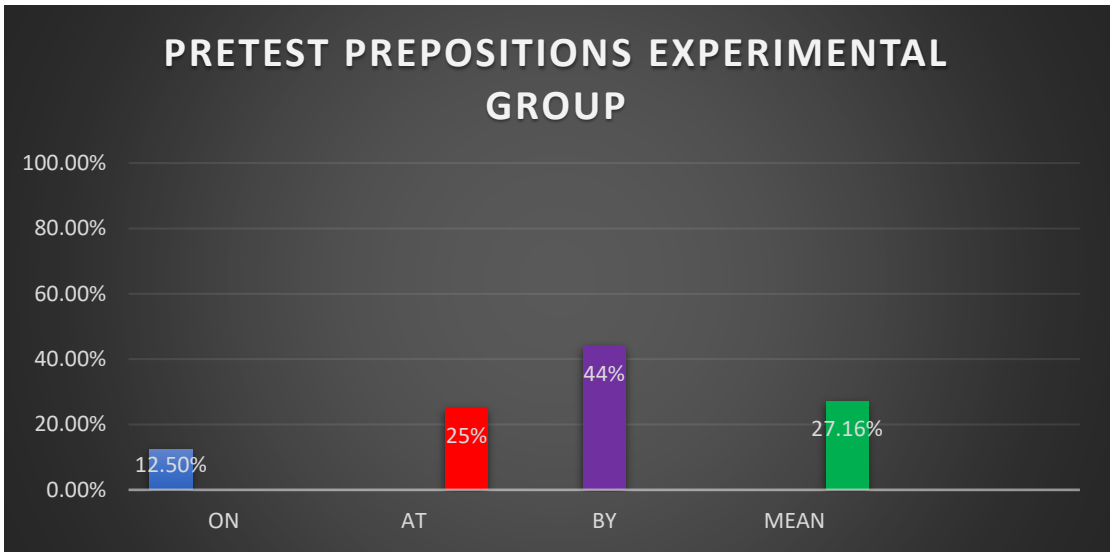
Regarding the level of education, from the 177 correct answers obtained in the training of the preposition *by*, 141 were given by participants who hold a university or master's degree while 105 were given by female participants.

Figure 3. Control Group Pretest Prepositions and Mean



As evidenced in Figure 3, the preposition *on* obtained the lowest performance whereas the preposition *by* obtained the highest. The mean of the control group for the correct answers was 27,83%.

Figure 4. Experimental Group Pretest and Mean



As we can observe in Figure 4, the preposition *on* obtained the lowest performance whereas the preposition *by* obtained the highest. The mean of the control group for the correct answers was 27,16%. If we contract Figure 3 and Figure 4, we can observe that both groups obtained similar results.

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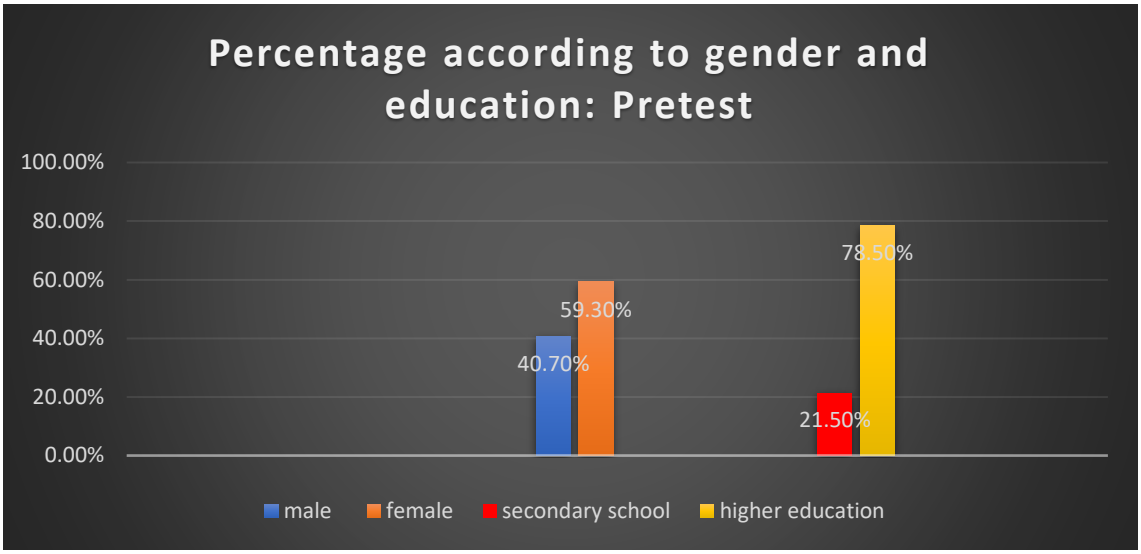
Table 6. Pretest results regarding gender and level of education

Total of correct answers	Gender: male total number of correct answers	Gender: female total number of correct answers	level of education: secondary school	level of education: University or master's degree
330	134	196	71	259

The results evidenced in Table 6, do not contemplate the results from the preposition *in*, as we have decided to disregard it from the study due to the high number of accurate answers. In order to better unterstand these figures, let us see them in Figure 5 below:

Figure 5



6.2. Posttest 1 grammar (prepositions)

In order to carry out the Posttest 1, participants had to follow exactly the same procedures described in the pretest (see 7.1)

Table 7. Posttest 1 preposition on

preposition on	on a farm	on an island	on indepen-dence day	on the bus	on this list	on the phone	في أول من ديسمبر (on the 1st of Dec.)	في التلفزيون on TV	في يوتيوب on You-Tube	عليهم خصم on sale	% of correc t an-swers
control group	8	9	11	9	8	14	12	11	9	13	X= 10400 / 200 = 52%
experiment-tal group	20	15	15	16	16	18	17	17	18	19	X=17100 / 200 = 85,5%

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Regarding Table 6, we would like to highlight that the first two collocations in the song "on sale" and "on a farm" were the two which obtained most correct answers. These results are in keeping with the working memory capacity [50]. Brain capacity is limited to approximately five to seven pieces of information. Our brain tends to firstly memorize the seven pieces of information on a list or in a text. In this first posttest we can observe a better performance in the experimental group compared with the control group.

From the 275 accurate answers regarding the preposition *on*, 192 were given by participants who majored from university or have a master's degree. 179 right answers were given by females.

Table 8. Posttest 1 preposition at

preposition at	at Christmas	at 234 Oxford street	at alramsa@email.com	at the end of the month	at the weekend	at night	في 7 at 7	laugh at	yell at	good at	% of correct answers
control group	4	6	14	6	11	8	20	6	6	6	X= 8700 / 200 = 43,5%
experimental group	5	10	15	7	20	8	20	8	7	14	X= 11400 / 200 = 57%

Regarding Table 7, the phrase "at Christmas" obtained a slight improvement in both groups compared to the pretest, this improvement was also homogeneous. This can be explained by the fact that this phrase was not present in the song. In other words, both groups had the same type of input, they just read this phrase one on the training sheet (see appendix D). Concerning the phrase "at 234 Oxford street", the experimental group performed slightly better than the control group as this phrase was present in the song. However, this phrase was translated from Arabic into English and as in Arabic there is no preposition for such phrase (I live in Oxford Street, 51), participants translated it literally. The collocation "at Alramsa@email.com had a homogenous progress; both groups had the same input as this phrase is not present in the song.

As we have previously mention, our brain tends to memorize the first seven pieces of information. In a song, apart from the actual beginning, the chorus is also considered a new beginning as it is repeated several times throughout the song. Our chorus "on the weekend in, in the USA, at the weekend in the UK, UK". All participants in the experimental group translated the sentence "I will see you on / at the weekend" correctly.

Table 9. posttest 1 preposition by

preposition by	by preparing for it	go by metro	by mistake	by chance	by credit card	by Shakespeare	by my side	by myself	by 5 pm	by the lake	% of correct answers
control group	8	13	15	17	7	15	13	15	6	6	X=11500 / 200 = 57,5%
experimental group	7	14	15	17	7	16	14	15	6	16	X=12700 / 200 = 63,5%

Table 8 shows us the result obtained regarding the preposition by, which was intentionally left out of the song so that we could compare if there was a homogenous improvement in both the control and the experimental groups. We can observe very similar results in both groups.

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The few participants who did not use the collocation "written **by** Shakespeare", kept using the preposition **from** instead.

Figure 6. posttest 1 Control Group Posttest 1 Prepositions and Mean

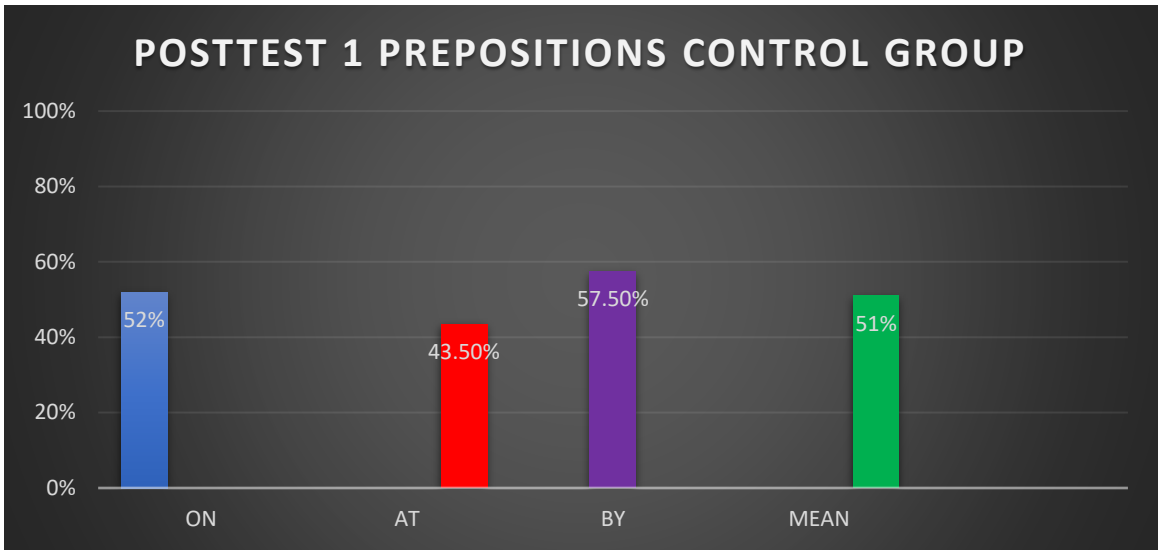

Figure 6 shows that the mean of the control group is of 51% of correct answers. This percentage almost doubled when compared to the control group mean in the pretest (Figure 3), which was 27,83%. We can confirm that training contributes to an improved performance in the discrimination and identification of L2 [20, 51,52]

Figure 7. Experimental Group Posttest 1 Prepositions and Mean

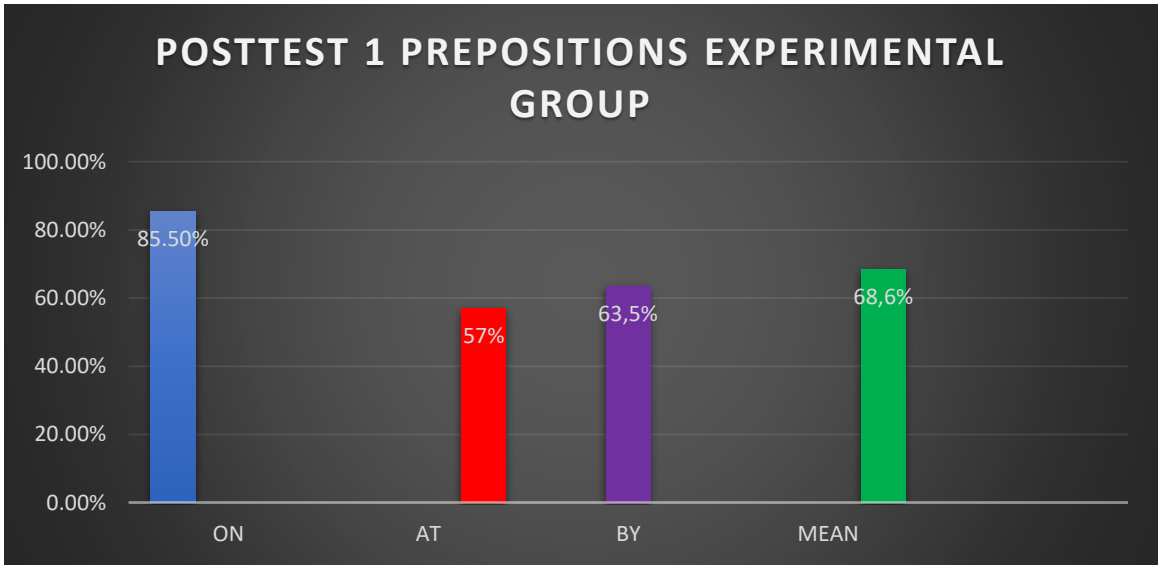

Figure 7 evidences the performance of the experimental group in the posttest 1. We can already observe better results when compared to the control group in the same posttest (Figure 6).

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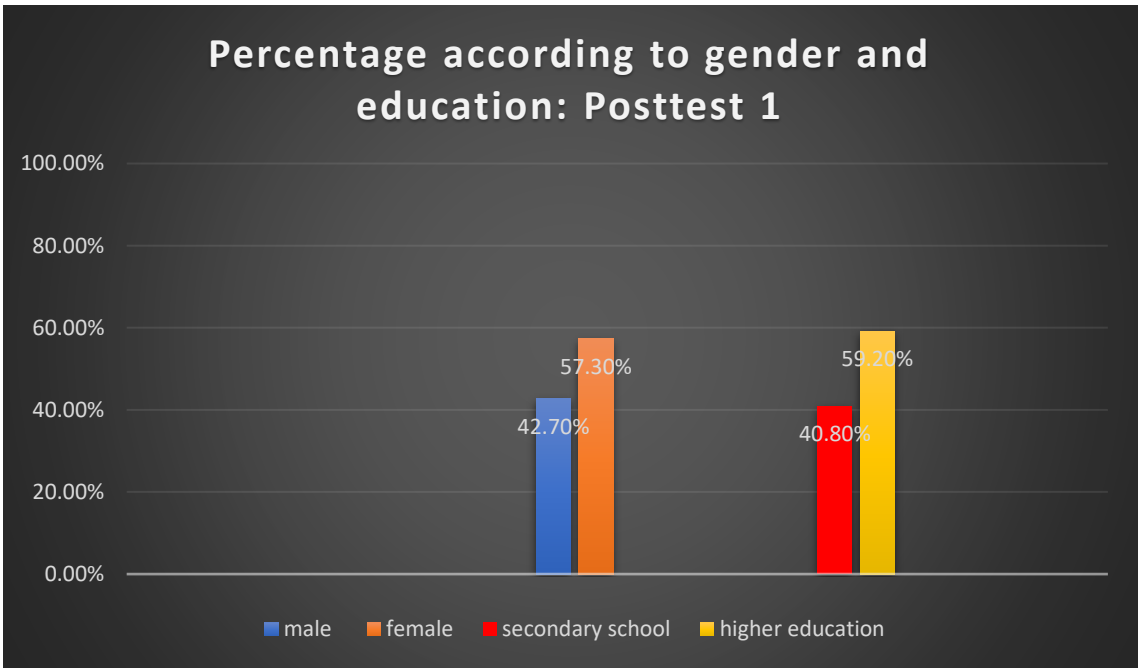
Table 10. Posttest 1 results regarding gender and level of education

Total of correct answers	Gender: male total number of correct answers	Gender: female total number of correct answers	level of education: secondary school	level of education: University or master's degree
718	306	412	293	425

As we can observe in Table 10, the posttest 1 confirmed the proclivities in the pretest: Female participants and the ones who hold a University or master's degree obtained better results. Let us visualize these figures in the graph bellow:

Figure 8



6.3. Posttest 2 grammar (prepositions)

Posttest 2 was administered after the final training session, session 6. Below there are the results obtained by both groups:

Table 11. Posttest 2 preposition on

preposition on	on a farm	on an island	on indepen-dence day	on the bus	on this list	on the phone	في أول من ديسمبر (on the 1st of Dec.)	في التلفزيون on TV	في يوتيوب on You-Tube	عليهم خصم on sale	% of correc t an-swers
control group	12	14	13	12	9	15	14	14	13	14	X=13000 / 200 = 65%
experimental group	20	20	16	20	19	20	18	19	20	20	X=19200 / 200 = 96%

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Table 11 shows us the results regarding the preposition 'on'. It can be seen that the experimental group almost mastered this preposition while the control group also improved its performance but not even one collocation with the preposition 'on' was mastered.

Table 12. Posttest 2 preposition at

preposition at	at Christmas	at 234 Oxford street	at alramsa@email.com	at the end of the month	at the weekend	at night	في 7 at 7	laugh at	yell at	good at	% of correct an-swers
control group	8	9	16	9	13	9	20	9	8	8	X= 10900 / 200 = 54,5%
experimental group	8	19	17	9	20	9	20	11	9	20	X=142 00 / 200 = 71%

It can be observed in Table 12 that the collocations *at Christmas*, at the end of the month, *at night*, *yell at*, which were not present in the song obtained the same or nearly the same number of correct answers in both groups. The table shows that the phrase *good at* present in the song stood out in performance when compared to the control group, whose majority kept using *good in*.

Table 13. Posttest 2 preposition by

preposition by	by preparing for it	go by metro	by mistake	by chance	by credit card	by Shakespeare	by my side	by myself	by 5 pm	by the lake	% of correct answers
control group	12	16	17	18	11	17	16	17	9	10	X= 14300 / 200 = 71,5%
experimental group	13	16	18	19	12	17	17	18	10	20	X= 16000 / 200 = 80%

Table 13 evidences the results regarding the preposition by, which was intentionally left out of the song. We can observe a homogenous improvement in both the control and the experimental groups. We can observe remarkably similar results in both groups, except for the collocation *by the lake*, which was present in the song used in the training of the experimental group. It can be seen that the experimental group has mastered this collocation.

Figure 9. Posttest 2 Control Group Prepositions and Mean

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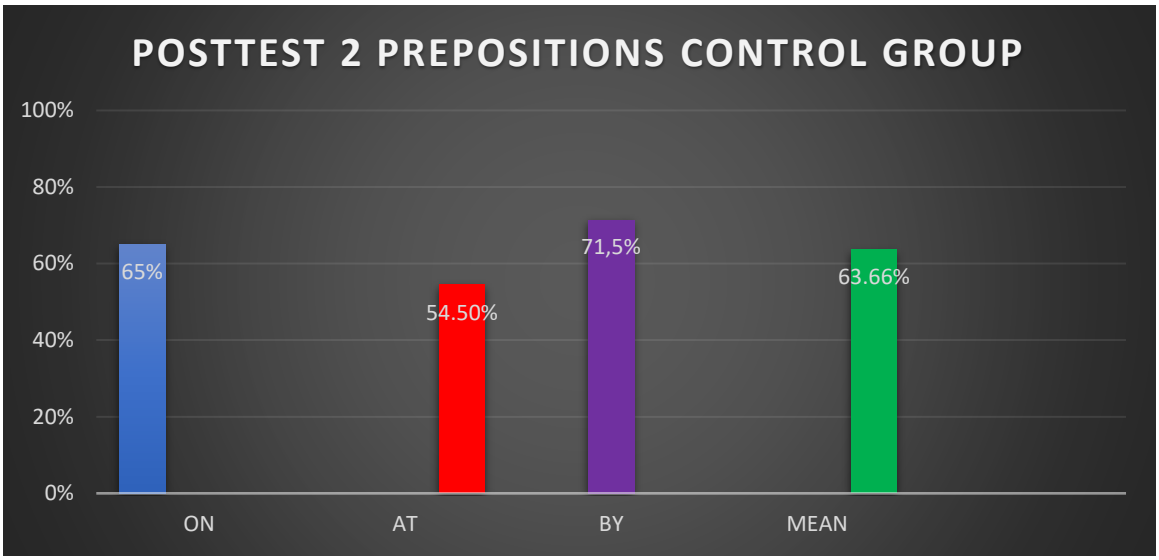

Figure 9 evidences the shows that the mean of the control group is of 63.66% of correct answers. This percentage more than doubled when compared to the control group mean in the pretest (Figure 3), which was 27,83%. Again, we can confirm that training contributes to an improved performance in the discrimination and identification of L2 [20, 52,53].

Figure 10. Posttest 2 Experimental Group Prepositions and Mean

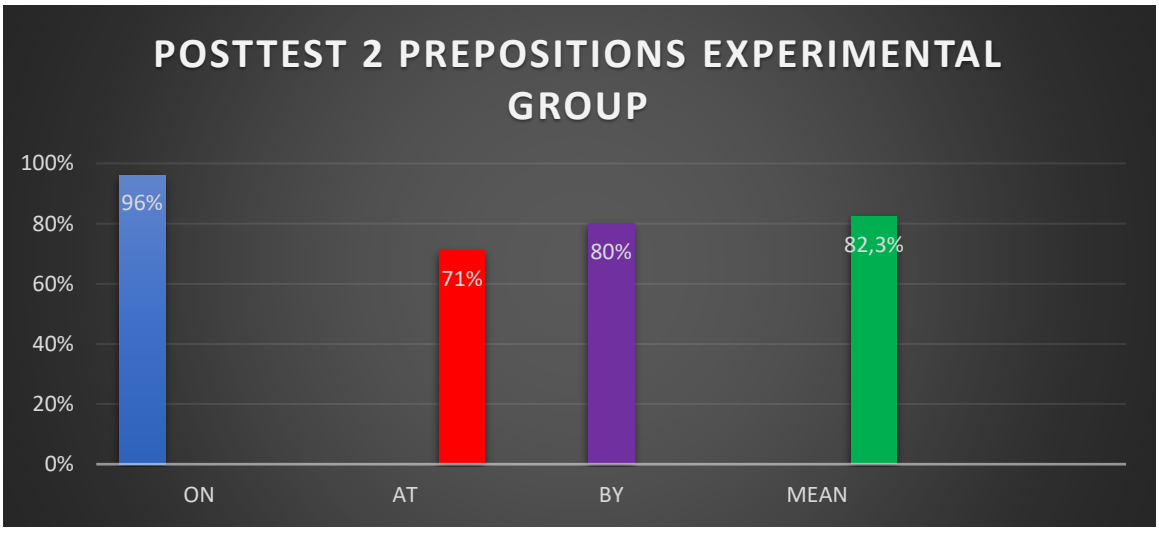

Figure 10 evidences the performance of the experimental group in the posttest 2. We can observe results almost 20% higher when compared to the control group mean (Figure 9).

Table 14. Posttest 2 results regarding gender and level of education

Total of correct answers	Gender: male total number of correct answers	Gender: female total number of correct answers	level of education: secondary school	level of education: University or master's degree
876	407	469	414	462

Figure 11.

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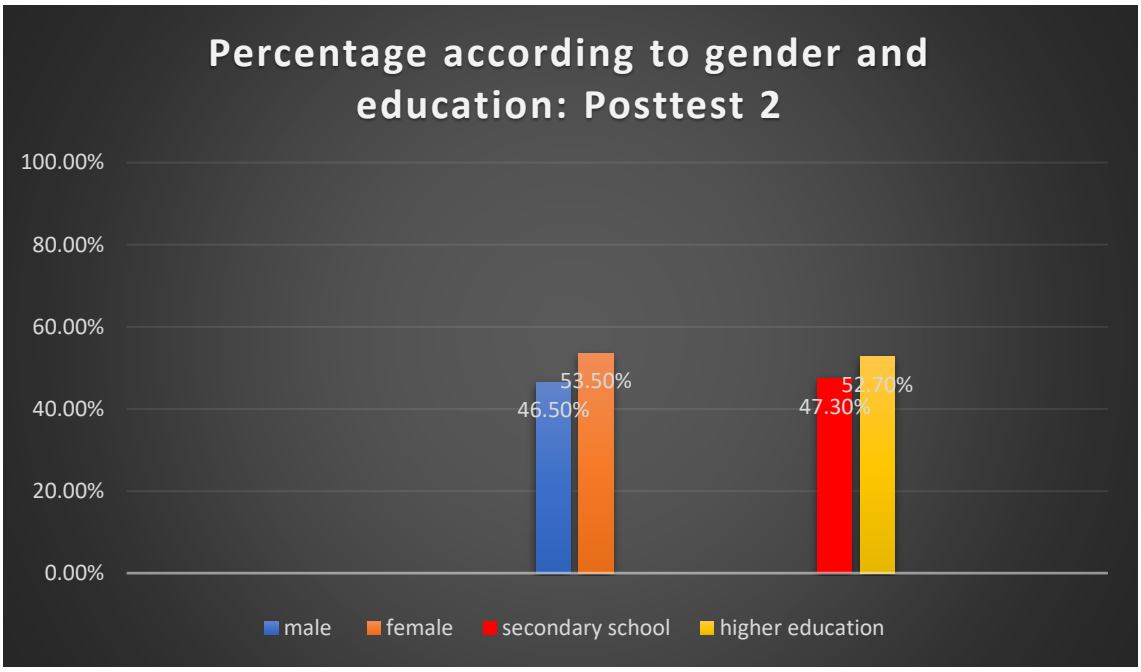

Figure 11 shows us a more homogenous panorama, while there is a seven-percent difference between the correct answers between male and female participants, there is a five-percent difference between participants who completed secondary school and the ones who pursued higher education. The differences in level of education in the pretest were over 50%.

6.4. Descriptive analysis

In order to make a descriptive analysis, the Mann-Whitney U test was applied:

To test the hypothesis of whether there are differences between the pretest and posttest2 regarding the control and experiment groups, the first thing we have done is to calculate a variable of the difference between the scores of posttest 2 and the pretest. Then, to see if there are differences between this variable depending on the group, (as the normality of the difference variable was not fulfilled in both groups) we have used the nonparametric Mann-Whitney U test where the hypotheses are:

H0: There are no differences between the means between the control group and the experimental group.

H1: If there are differences between the means between the control group and the experimental group.

Table 15.

	Control			Experimental				
	Mean	s.d.	med.	Mean	s.d.	med.	z	p-value
Differences pre-post2	10,750	1,070	11	16,450	0,759	17	-5,531	< 0,001

As demonstrated in Table 15, a result z = -5.531 was obtained with an associated p-value less than 0.001, which is why the null hypothesis of equality of means was rejected and therefore we can say that the increase in the scores in the experimental group (mean = 16.450; standard deviation (s.d.) = 0.759; median 17), is significantly higher than that found in the control group (mean = 10.750; SD = 1.070; median 11).

Figure 9.

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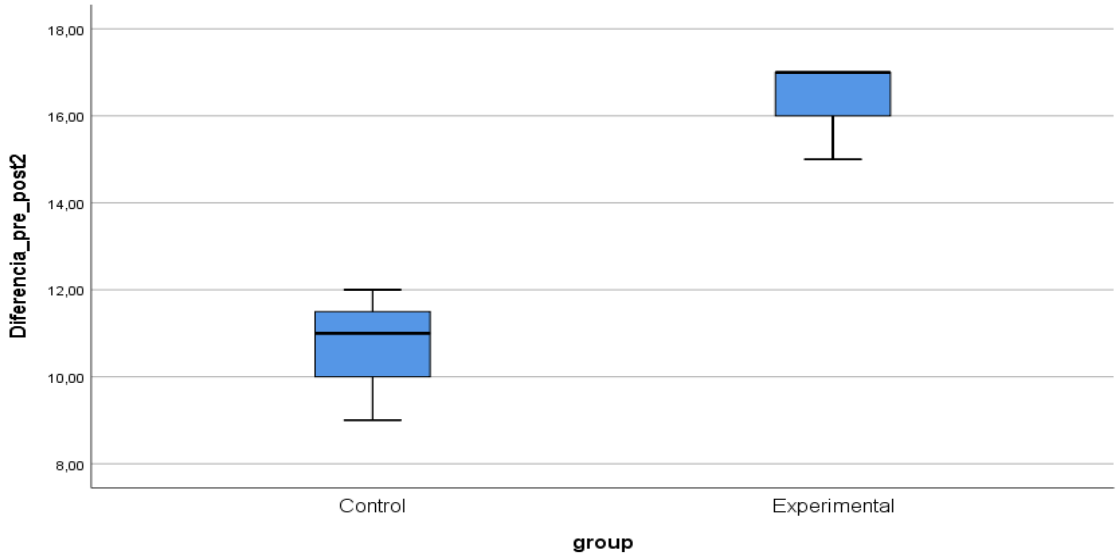

Figure 9 illustrates the differences between the means between the control group and the experimental group.

7. Conclusion

This study has attempted to demonstrate that students' strengths and weaknesses should be considered in the learning process and with a simple ten-minute training the performance can be considerably improved. We would like to emphasize that grammar, more precisely prepositions, was arbitrarily used in this study; nevertheless, educators can and should use any subject topics to assist learners. A short session was favored to an extended one due to the fact that this study was designed to be implemented in the classroom where teachers usually work with a tight schedule.

The ambition of progress led to the non-preservation of linguistic identity in the UAE. It can be witnessed daily situations in which an Emirati citizen is unable to speak their own native language, i.e. Emirati Dialect, in their own country or rather forced to speak a second language, namely English, which some locals often struggle with [53]. Although the country has over 220 years of bonds with England, not all Emiratis master the language. There are many instances of Arabic influence in Emirati English, one of them is the negative transfer of Arabic prepositions in Emirati English.

As we could read in our Theoretical Framework, Musical intelligence has been proved to be an isolated area which can stand out from other areas. The literature is replete with accounts of astonishing autistic young people who amazingly perform music. [8 -12; 33-38]. Moreover, studies have suggested that music may provide benefits for people with Alzheimer's disease as well as other sorts of dementia [39, 42, 44, 45], as well as release anxiety and promote well-being. There are also studies regarding musicians' brains which demonstrated to be larger in the left cerebral hemisphere when contrasted with other individuals. [1]

Concerning our four research questions, the first inquired whether there were influences of MSA and Emirati Dialect in the acquisition of prepositions in Emirati English. We could evidence that there is an over usage of the preposition "in" in the Emirati English. This happens due to the fact that the preposition *fi*, usually translated in English as "in", is the most used preposition in Arabic. This negative transfer was encountered in all the studied prepositions in this study, mainly in the pretest, when participants were still not aware of the correct usage of prepositions. The preposition in obtained the best results, 98% of correct answers. That's why we decided to discard this preposition from our training. The preposition "on" was substituted in the pretest by the preposition "in" in nine out of ten expressions: on a farm, on an island, on independence day, on the bus, on this list, on the 1st of December, on TV, on YouTube and on sale. The only expression that was about 50% correct was on the phone. The preposition by, however, has more expressions correctly petrified in Emirati Arabic. Six out of ten expressions (by metro, by mistake, by chance, by Shakespeare, by my side and by myself) obtained more than 50% percent of correct answers. Regarding the preposition at, only the expression at 7 o'clock is petrified correctly in Emirati English, as it obtained 97,5% of correct answers.

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Concerning the preposition "from" (min in Arabic), present in Appendix B, three of the four sentences were negatively transferred into English by more than 90%.

Our second research question investigated the learning through music and through the traditional learning (reading and repeating the content). The null hypothesis of equality of means was rejected (see Table 15) and therefore we could confirm that the increase in the scores in the experimental group was significantly higher than that found in the control group. In other words, learning through music was proved to be statistically more efficient than learning through a more conventional way.

The following research question analyzed the educational level and gender, two important social variables related to linguistic behavior [54,55] and it was revealed that the level of education plays a great role in the proficiency of English: in the pretest 78.5% of the correct answers were among the participants who pursued higher education. Our findings are in keeping with Alnamer S.'s and Alnamer M.'s study [56] which revealed that educated Emirati speakers are more in contact with English and use English loanwords more than the uneducated counterpart. Conversely, uneducated Emirati speakers, instead of words in English would prefer to use Persian, Hindi, and Turkish words.

Regarding gender, the female participants performed better than the masculine ones: 59.3% of the correct answers in the pretest belonged to women. Again, our study is in line with Alnamer S. and Alnamer M. [56] who also demonstrate that female speakers of UAE use English more than their male counterparts in light of the fact that women pursue prestige even in the linguistic level. Male speakers of UAE; nevertheless, use more of Persian and Hindi loanwords and are not usually mindful that these were in fact borrowed. We could also observe that the more training both groups received the shorter was the difference in correct answers concerning these two social variables.

The achievement of superior results when learning through music demonstrated in this present study are similar to the ones obtained in our previous study [20], in which the content taught through dance (experimental group) obtained a statistically meaningful difference compared to the control group (participants were trained in a traditional way, by reading and repeating the content). Therefore we propose that learning through the MI, be it kinesthetic, musical or any other intelligence is worthier than just learning in a traditional way as demonstrated in this study in which we applied musical intelligence to boost learning as well as in our previous study in which kinesthetic intelligence was used in the trainings.

This paper presents various limitations as well as proposals to be improved in future studies. The principal restriction respects the quantity of participants. Having groups of twenty members in the trainings may not be sufficient to test for homogeneity. In future research an expanded number of participants would surely invigorate the outcomes and subsequently the capacity to analyze the findings of the current study more precisely.

Our previous study [20] marked a solid beginning for questions regarding MI. This study is a detailed follow-up study applying musical intelligence. The data collection used in this study tracked participants responses during the preposition task, responses which can be analyzed and coded in order to study participants' performance and specifically, to which extent accuracy improved as the training advanced. Analyzing more participants in this way may shed more light on the findings of the training obtained in the present study.

A long-term goal is to explore MI applied in learning. There are other intelligences such as mathematical, naturalistic, inter and intrapersonal which may be applied in similar experiments to corroborate our findings as well as to seek more factors which facilitate learning. In such a line of research questions regarding the cognitive skills and learners' strengths can also be explored. In conclusion, this paper marks the second step in this line of MI research, and we hope for follow-up studies which will keep finding out elements which facilitate learning.

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Appendix A. Questionnaire to select participants to the experiment and control group:

Sex: __ male __ female

Level of education: __ secondary school __ University degree

__ master's degree __ PhD

1. Do you usually listen to music?

Yes, every day. _____ Yes, between 5 to 6 days a week. ____

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Yes, 3 to 4 days a week. ____ Yes, one or two days per week. ____

No, never / almost never. ___

2. Is music important in your life?

_____

3. Do you like to sing along when you are listening to music?

_____
_____

4. Does music relax you?

_____
_____

5. Can music change your mood for the better? In other words, can you feel happier / more motivated when listening to music?

_____
_____

6. Do you play any instruments?

___ yes ___ no

If yes, which instrument do you play?

_____

And how long have you been playing it?

_____

7. Are your parents or siblings musicians or do they play any instruments?

_____

If so, which instruments do they play?

_____

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Appendix B. Pretest and Posttests I and II (Arabic to English; participants had neither the translation nor the colored prepositions shown below. The prepositions in **green** means that the preposition exists in only one of the languages)

Please, translate the following sentences into English:

1. **انتي من العمل في 7.** (I finish work at 7)

_____

2. **ترومين تشوفينها في الصورة.** (you can see her in the picture)

_____

3. **هو متزوج من ماريا.** (he is married to her)

_____

4. **بشوفك في إجازة نهاية الأسبوع.** (see you on / at the weekend)

_____

5. **اشوفك في أول من ديسمبر.** (See you on December 1st.)

_____

6. **بشوفك في ديسمبر.** (I will see you in December.)

_____

7. **انا شفته في التلفزيون** (I saw it on TV.)

_____

8. **انا شفته في يوتيوب.** (I saw it on YouTube.)

_____

9. **من زمان ما شفتك** (long time no see.)

_____

10. **أنا طالع اجازة** (I am **on** vacation.)

_____

11. **من زمان وأنا أبا هالشي** (I've been wanting this for a long time.)

_____

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12. اتريني (wait for me)

---

13. شو رايك نسير بالمترو؟ (what do you think about going by metro?)

_____

14.هالجينزات عليهم خصم (These jeans are on sale.)

_____

15. **51** ساكن على شارع الشيخ زايد (I live at 51 Sayed road.)

_____

16.ساكن في برج على شارع الخير (I live in a tower on / in Alkhair street.)

_____

17. سويت هذا بروحي. (I did it by myself)

_____

Appendix C. Pretest and posttests I and II: Prepositions Part II

Complete the text with the correct preposition (on, in, at, about, for, since, from, through, to, by, with) when necessary.

1. I live ___ a farm.

2. Pat is __ an island.

3. Let's have a barbecue ___ Independence Day.

4. I will see you ___ Christmas.

5. Come to my office ___ 234 Oxford street, first floor.

6. I am __ the bus now. I will call you later.

7. Buy everything which is ___ this list.

8. Max is __ the phone now.

9. Email me ___ alramsa@email.com.

10. This shirt comes ___ four different colors. (to indicate a shape, color or size)

11. You can pass the exam ___ preparing for it.

12. Can we go __ metro?

13. Patrick visits us ___ spring.

14. She has been living ____ London since 2007.

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15. I am sure she did it ___ mistake.

16. You should send these books ___ mail.

17. You can pay ___ credit card or cash.

18. I met Sheila ___ chance in the shopping mall.

19. Hamlet was written ___ Shakespeare.

20. ___ the end of the month.

21. Stay ___ my side and don't move, please.

22. I hate it when my mom yells ___ me.

23. You have to finish the report ___ 5 pm. (that is, no later than 5 pm)

24. His house is ____ the lake. (that is, near the lake).

25. I have English classes ___ the morning.

26. We always go out ___ night.

27. Are you laughing ___ me?

28. Mike is really good ___ playing the guitar.

29. The bag is ___ the car.

30. I forgot my wallet ___ in the taxi.

Appendix D. Preposition Training – Part 1 (both groups were explained how to use the following prepositions and each session started by reading the list below)

We use **on** for dates and for holidays that last just one day:

On Independence Day / **on** Halloween / **on** Saint Patrick's Day

My birthday is **on** the 22nd of March.

These shirts are **on** sale.

For big means of transport on which you can walk.

I am **on** the bus, **on** the train, **on** the ship.

For all the social media: **On** YouTube, **on** Instagram, **on** Facebook.

For the expressions **on** TV, **on** the radio and **on** the phone.

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We use **at** before the number of an establishment (houses, clinic, pharmacy) + street name.

The supermarket is **at** 27 Oxford Street.

I live **at** 512 Conrad Road.

I never go out **at** night.

Before holidays that last longer than one day:

I will visit you **at** Christmas. We went to Malta **at** Easter.

With the verbs yell and laugh at someone:

He yells **at** you. He laughs **at** you.

With the expression be good **at**: Paul is good **at** singing.

We use **in** with parts of the day **in** the morning, **in** the afternoon, and **in** the evening.

with months: I was born **in** March. I will see you **in** September.

With years: He was born **in** 1997.

With small vehicles in which you cannot stand up: I am **in** the car, **in** the taxi.

We use **by** to describe how you travel somewhere: I went **by** car, **by** bus, **by** bike, **by** plane…

We use by to mean "near". She lives **by** the train station. Her house is **by** the lake.

The means we pay something: We pay **by** credit card pay **by** check, but we pay **in** cash (this is not he means but the money itself)

To express 'how to do something': **by** + -ing form to describe how to do something:

By pressing this button, you turn on the alarm system. Then **by** entering the code 1256, you can switch it off.

To express that you do something without anyone else's help, or alone:

I made the cake **by** myself.

He came all **by** himself.

In the expressions:

By mistake and **by** chance.

Appendix E. Preposition Training – Part 2 (both experimental and control groups had the following text; however, the experimental group sang along as they were drilled)

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The karaoke for this song is available online at:

https://www.youtube.com/watch?v=0_yVbr6kLhw

On sale, **on** a farm, **on** the list…**on** an island and **on** vacation.

On the phone, **on** the radio and **on** TV: information

on YouTube **on** WhatsApp. **On** Mon**DAY**, **on** the 1st of March. **On** the 2nd of January, **on** the third of January but **in** February.

On the WEEKend in, in the USA

At the weekEND **in** the UK, UK

On the Street in the USA

In the Street **in** the UK

But **AT** 30 Deira Street, is that ok?

By the lake, **in** July, **on** a bus here in Dubai

At seven o' clooooooock,

yeah, I'm good **at** walking **in** this block.

On the WEEKend **in, in** the USA

At the weekEND **in** the UK, UK

On the WEEKend …**in** the US A (oh uoh uoh…)

At the weekEND **in** the UK yeah

On the Street **in** the US

In the Street: **in** the UK

But AT 30 Deira Street, at 30 Deira street, here **in** Dubai.

On the **WEEK**end **in, in** the USA

At the weekEND **in** the UK, UK … (fade out)