MUSICAL EXPERIENCE IN SINGING AND GRAMMAR ACHIEVEMENT IN ENGLISH LANGUAGE ACQUISITION

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Abstract: Growing evidence has demonstrated the relationship between music and language and its influence on different aspects of language learning, such as, auditory perception, pronunciation, reading, writing, verbal memory and grammar. Many studies point to the evidence that learners with musically trained ears have an advantage of a better discrimination, recognition and imitation of foreign speech sounds, as well as an increased verbal memory in foreign language. However, there are very few studies contributing to the relationship and influence of music, and particularly, of singing on grammar achievement. Acknowledging this gap in language acquisition research, the aim of the current study is to test the relationship between musical experience in singing and English language learning, particularly in the aspect of grammar achievement. Fifty adult Spanish learners of English were involved in the study. The English grammar achievement was assessed by an initial grammar pre-test, a validated Cambridge English (B1 level) grammar post-test, and three questionnaires examining the demographic, linguistic and music background in singing of the learners. A close relationship between musical experience in singing and English language learning was established. The current study opens new directions for further studies to additionally determine the influence of musical experience on the grammar achievement in the course of foreign language acquisition.

Keywords: musical experience, singing, grammar achievement, English language learning

Introduction

The process of learning a foreign language as an adult can be a fun and, at the same time, very challenging task. Many learners, who have started studying a foreign language after childhood, are observed to have different levels of attainment of L2 proficiency. One may ask about the reasons of learning differences between people who have spent the same amount of time in the same environment of the acquired language. The answer displayed in the results of a plethora of research studies is multidimensional. Language learning and language acquisition is influenced by multiple factors: pure linguistic factors such as linguistic background, amount of knowledge in the native (L1) language [1], proximity between the native and the foreign language phonetic inventory [2], the starting age of learning [3]; extra linguistic factors, which include motivation [4], working memory [5], attention control [6], language aptitude [7] and of special interest for us, musical experience and musical abilities [8, 9].

On the fundamental principle of signal generation, singing, as a form of musical training and experience, shares common ground with speech production. When
producing vocal sounds, an individual uses their vocal chords, thus, singing and producing speech are in a close relationship. Singers, as language learners, have and improve an already established vocal-motor system [10], which, in the process of utilizing and practising a foreign language speech, they continue developing. This evidence points to the benefits of singing abilities on developing good pronunciation, improvement in sound perception, and furthermore, of feedback control [11].

Different studies conclude that using sung syllables can form a perfect learning tool for beginners of L2. Studies provide evidence that adults perform better in word segmentation tasks with the help of sung syllables [12] compared to monotone speech [13]. A study on homogeneous group of 60 adult participants divided into speaking, rhythmic speaking or singing group for recalling and producing of spoken Hungarian phrases, affirms that the singing group showed superior results of “short-term paired-associate phrase learning” in an unfamiliar language (Hungarian). The authors conclude that singing can facilitate most efficiently verbatim memory for spoken phrases and support L2 learning in verbatim recall tasks [14]. Christiner and Reiterer’s study [15] involving 27 instrumentalist, 33 vocalists and 36 non-musicians/singers, evidences that musically trained subjects with vocal and instrumental training, outperform non-singers/non-musicians in their ability to imitate unintelligible foreign speech and accents.

A number of authors have considered the potentially strong link between music and grammar, and music and syntax as part of the learning process [16, 17]. Evidence demonstrates that rhythm perception plays a big role in predicting syntactic skills in the language development of 6-year-olds [18] as well as in adults [19, 20, 21]. Although substantial data confirms the beneficial influence of melodic presentation of prosodic cues and sung syllables on speech segmentation, auditory perception and verbal memory, data on the effect of musical experience of singing on developing and improving grammar skills in foreign language learning is still very limited.

**Aim**

The aim of the current study is to test the relationship between musical experience in singing and foreign language learning, more concretely, in the aspect of grammar achievement. Observing the beneficial influence of music and singing on foreign language learning in the aspects of pronunciation, listening skills and vocabulary, we hypothesize that it would have favourable influence on grammar achievement as part of the foreign language acquisition process.

**Participants and Methods**

**Participants**

The current prospective observational study involved 50 adult Spanish students (18 men and 32 women). In terms of age, 84% of the participants fell in the range of 18 to 30 years. The educational background of the learners was Bachelor’s
degree (64%), secondary or high school (20%), and master or PhD (16%). All individuals reported Spanish as their native language, as 2% indicated their mother/father as an English native speaker and 6.1% indicated other relative(s) as native speakers of English. The majority of participants identified themselves as natives of Huelva, Spain.

Method
The study was survey-based, involving 5 main research instruments: two grammar tests, an initial grammar placement test followed by a validated Cambridge English grammar progress test. Additionally, we used a demographic, linguistic and musical/singing experience questionnaire.

Study design
All participants were selected by an initial grammar test for entrance to Intermediate level (B1). The purpose of this pre-test was not to evaluate students’ performance on grammar achievement, but only to estimate their initial overall English attainment and to place them into the appropriate English level. Four months later, the participants were given to complete a post-test, validated Cambridge English grammar progress test, covering grammar material of units 4, 5, and 6 of Complete PET Cambridge Course Book. The purpose of this post-test was to evaluate the grammar achievement and progress of students after the initial testing. Additionally, at the time of taking the post-test, the subjects were given to complete a demographic questionnaire, testing their demographic background and current academic achievement, linguistic questionnaire identifying their native language, as well as a musical experience in singing questionnaire, evaluating their musical interest and training in singing at an amateur and professional level.

Results
The results received from the demographic questionnaire showed that out of 50 participants, 18 (36%) were men and 32 (64%) were women. In terms of age, the largest percent participants, 48%, fell in the age group between 23 and 30 years, and the lowest, 2%, were in the age group of 36 to 40 years. With regards to educational achievement, 64% of the participants indicated to have completed or were still completing their Bachelor’s degree, 16% showed a completion of high-school, 14% have completed or were still completing a Master’s degree, 4% have completed secondary school and 2% specified to have completed other educational level. All participants (100%) indicated Spanish as their native language (mother-tongue). The majority of the participants’ (91.8%) indicated that their relatives were non-English speakers. All subjects (100%) identified themselves as natives of Spain and 74% as natives of Huelva.
The results of the study revealed lower number of population interested in singing (30%) and higher number of learners who do not like singing (70%). Even so, the results indicated outperformance of grammar in the lower percentage of learners interested in singing, the *Yes* group, showing a mean rank of grammar achievement 26.53, as opposed to those with no interest in singing, the *No* group, with grammar achievement of 25.06 (Fig. 1).

![Fig. 1 Grammar test results according to interest in singing](image1)

In terms of taking lessons in singing with a private teacher, at a professional level, the studied cohort showed a significant contrast. Only 2% of participants indicated to have received vocal training, as opposed to the rest, 98% who have not received such training. The high imbalance between the two groups explains the high outperformance of the untrained group in grammar achievement and the statistical insignificance in grammar achievement between the two groups.

Our study revealed six times higher number of learners who have not received musical training in singing at school, the *No* group, compared to learners who have received musical training in singing at school, the *Yes* group. No statistical significance in grammar achievement was found between the *Yes* and the *No* group. Due to the high imbalance between the two groups, we observed higher mean rank in grammar achievement in the *No* group (26,00). (Fig. 2).

![Fig. 2 Grammar test results according to musical training in singing at secondary/high school](image2)
A small number of participants (10%) had received professional training in singing in a choir or music school, 45 vs 5 number of students. Even though the differences in grammar achievement between the two groups did not show statistical difference, judging by the difference in the mean rank between the two groups (19.50 for the Yes group and 26.17 for the No group) and the strong imbalance in population in the two groups, we can conclude that there is a tendency of outperformance in grammar achievement in the Yes group with regards to singing in a choir or at a professional music school (Fig. 3).

Fig. 3 Grammar test results according to musical training in singing in a choir / at a professional music school

In terms of musical training in singing at an amateur level, i.e. as a hobby, taking lessons from a friend, relatives, videos on the internet, a high imbalance between the number of participants in the Yes group compared to that in the No group (8 vs 42) was observed. Although, the differences in grammar achievement between the two groups were not statistically significant, the analysis of results showed a clear outperformance of the vocally trained individuals (the Yes group) observing a grammar achievement with a higher mean rank of 32.69 (Yes group) compared to that of the No group (24.13), despite the lower percentage (16%) of vocally trained population (Fig. 4).

Fig. 4 Grammar test results according to musical training in singing at an amateur level / as a hobby

395
Discussions and Conclusions

Considering that musical experience and deeper musical training in the life of a child or an adult may start with singing, the present study was outset with the main aim to investigate the relationship between musical experience in singing at an amateur and professional level, and its influence on grammar achievement as part of English language acquisition. Although the results between the two groups: with musical experience in singing and with no such experience, did not show statistically significant differences in grammatical outperformance of the singing over the non-singing group, the analysis of results shows a clear tendency of higher overall grammar achievement of the singing group.

In conclusion our study points to a beneficial influence of singing on grammar achievement as part of the foreign language learning process in adults. The tendency of outperformance in grammatical skills in subjects with singing experience on an amateur and professional level, leads to the conception that musical input, such as incorporating singing-related method into the language teaching process, could facilitate the process of language acquisition and achievement in grammar. Therefore, music and language as two interconnected faculties that work in tandem and strongly support the processes of language acquisition should be further explored. This leads us, as language teachers, to reflect upon the convenience of incorporating musical input into the modern practice of language teaching to adults.

References:


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