

# **A Musical Approach to Shared Reading: The Effects upon English Vocabulary Acquisition in an Arabic Environment**

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## **Abstract**

The notion of music enhancing language learning is increasingly common in the bilingual classroom. Yet, little is known about the effects of music on second language vocabulary acquisition. This article investigates the potential impact of a musical approach to Shared Reading on the English vocabulary acquisition of bilingual learners. Subjects were one hundred and fifty Grade One Arabic/English speakers, of mainly Kuwaiti nationality. Six intact classes were divided equally into two groups, Treatment and Contrast. The No-Music group subjects (Contrast) shared stories without the benefit of Music while the Music subjects (Treatment) heard a sung version of the same stories and simultaneously viewed the printed text. Quantitative results indicated statistically significant differences between the groups, having music and not having music. Implications for the use of music in Shared Reading instruction in the second language classroom are discussed and further research is recommended.

## **Review of Related Literature**

### *Music and Verbal learning*

Music is a powerful force that can be used to great effect in a learning setting (Bucko & Elliott, 1997). The literature abounds with positive statements regarding the efficacy of music as a vehicle for bilingual acquisition (Medina, 1990; Jensen, 1996). Although the effects of music upon English vocabulary acquisition have not been thoroughly investigated, there is empirical support for music as an aid to other forms of verbal learning.

In the psychological research, music and its subcomponent, rhythm, have been shown to benefit the rote memorization process. When various types of verbal information (e.g. multiplication tables, spelling lists) have been presented simultaneously with music, memorization has been enhanced (Douglas & Willatts, 1994; Chong & Gan, 1997). Such research on the effectiveness of music has indicated that its retentive aspects can be maximized when the targeted verbal information carries meaning (Glazner, 1976; Koppelman & Imig, 1995). Music, however, is not limited to benefiting the rote memorization process. It has proven beneficial when the objective has been to retain the meaning of verbal information (Fitzgerald, 1994). This, in fact is the case when vocabulary is acquired: It is the word's semantic properties, which must be retained in memory. Music can focus the mind on the new words and promote learning through an interactive process (Wolf, 1992).

### *The Incidental Acquisition of Vocabulary*

The acquisition of vocabulary has been the concern of second language researchers for many years. According to Krashen, (1989) vocabulary may be acquired incidentally through sharing stories. As Nagy and Herman (1987) note, this acquisition of vocabulary takes place before the child can read and without explicit instruction of any kind. Moreover, even after the child begins school, he/she continues to acquire vocabulary, which has not been learned formally. Of the 3,000 words, which the average child acquires each year, only a portion are learned as a result of instruction received at school (Medina, 1990). Thus, Nagy and Herman have argued that the remainder of the vocabulary must be learned incidentally from a variety of sources including, but not limited to such sources as television and parents.

Krashen's input hypothesis (1989) posits that new unfamiliar vocabulary is acquired when its significance is made clear to the learner. Meaning is conveyed by providing extra linguistic support such as actions. This in turn results in what Krashen refers to as

"comprehensible input" since the linguistic input is made comprehensible to the bilingual learner. He further posits that the amount of comprehensible input is proportionate with the amount of vocabulary acquired. Thus, vocabulary may be incidentally acquired through sharing stories because familiar vocabulary and syntax contained in the stories provide meaning to less familiar vocabulary and actions, which can clarify the meaning of unfamiliar words. In short, meaning is critical to the incidental acquisition of second language vocabulary, which may be acquired through sharing stories.

Apart from sharing stories, there may be other means of bringing about the incidental acquisition of vocabulary. Songs, for example, share similar elements to that of an oral story, yet the vehicle through which the song is conveyed is musical rather than spoken. Furthermore, if the oral story and song are identical, with the exception of their vehicle, then it follows that a song's vocabulary may be acquired by simultaneously providing extra linguistic support, such as actions, movement and illustrations. This may add more meaning to the learning (Fitzgerald, 1994).

#### *Music in Reading Instruction*

It is consistent with the nature and purpose of language to use songs to teach reading (Jalongo & Ribblett, 1997). Emergent readers will attempt to 'read' along in a Shared Reading of a familiar text, just as they join in and sing along to a familiar song. If both are combined, they bring the natural music of language with them when they read simultaneously (Snyder, 1993). Moreover, children actually enjoy reading and singing together (Smith, 1984). Similarly using musical techniques such as rhythm, pitch and timbre in shared reading, may provide a suitable vehicle for word study or for reinforcing words already learned through written means. Repetition supports and enhances vocabulary acquisition by offering bilingual learners the familiarity necessary to read higher-levelled texts in a meaningful context. Furthermore, teachers using repetitive texts can model and exaggerate the repetition,

rhyme and rhythm of the story, thereby encouraging the children to join in. The conventions of print, along with high frequency words, are seen over and over again and are learned naturally without any boring drills.

A child's initial introduction to patterned text often first occurs in songs, chants and rhymes that are repeated over and over again throughout childhood. Once children become familiar with this patterning, they are excited and able to participate in Shared Reading. However, learning to read is a complex process; it is like weaving an intricate web of cognition, social-linguistic and psycho-linguistic processes. If the learner is bilingual, this orchestration becomes even more complex due to code switching from their first to second language. Since literacy cannot be forced upon a student who is not fluent in a given language, reading must incorporate meaningful expression (Lee, 1990; Schmitt & Meara, 1997). Shared Reading can involve meaningful expression in which a group of learners view an expert, usually a teacher, who reads with expression and frequently invites the children to join in or share in the reading (Routman, 1991). These reading situations are relaxed and social, and there is an emphasis on appreciation and enjoyment of the stories, songs or poems. Routman believes that Shared Reading offers a non-threatening approach to reading that strengthens verbal skills. Medina (1990) indicates however, that bilingual learners need additional oral reinforcement to internalize new vocabulary. If this is the case, does meeting the print in lyrics provide the learners with even more opportunity to learn the target vocabulary than meeting the print alone?

The use of a musical approach to teach vocabulary not only gives music its rightful place in the curriculum, but also enhances the outcome of vocabulary development (Chong & Gan, 1997). It broadens vocabulary acquisition into a multisensory experience, while reducing the tedium of repetition and drill. Language is a part of singing, not just because

songs use words, but rather because song melodies are constructed to complete the meaning of the words (Tucker, 1980). Contextual analysis, structural analysis and phonetic generalizations can be learned and reinforced through examination of the lyrics. This in turn may create meaningful expression, enabling the students to internalize and commit the new vocabulary to long-term memory.

In conclusion, the successful acquisition of vocabulary may be incidentally acquired through Sharing stories and songs in a second language. However, can a musical approach to Shared Reading, when coupled with the targeted second language, promote vocabulary acquisition more than other traditional and non-musical Shared Reading approaches? To date, this has not been tested.

## **Research Methodology**

### *Hypothesis*

The hypothesis of the present study is:

'A musical approach to Shared Reading alone has a greater effect on vocabulary acquisition than a non-musical approach in an Arabic bilingual setting'. In order to test this, the dependent variable, vocabulary acquisition, was investigated using a music/no music instructional medium to Shared Reading.

### *The Research Setting*

The research site for this study was a large Middle Eastern Immersion Bilingual School. This immersion approach refers to the state of being steeped in, or constantly bathed in that which is to be learned (Baker, & Jones, 1998). The setting is a bilingual (Arabic/English) one with many children being highly motivated, diligent and determined to be successful bilinguals.

### *Participants*

Subjects consisted of one hundred and fifty first grade upper-middle-class bilingual Arabic-English speakers, of mainly Kuwaiti nationality.

Using a Treatment - Contrast group Pre-test-Post-test Quasi-experimental Design with matching and repeated measures, the progress of six intact classes was chartered. The independent variable of the study was the classroom environment manipulated by means of music as its medium of reading instruction.

### *Design*

The research design, which most facilitated this study, was Quasi-experimental Research. This type of research is commonly employed in the evaluation of educational programmes when 'random assignment is not practical or possible' (Gribbons & Herman, 1997). The non-equivalent- group, pre-test-post-test design was used to enable differences between two groups to be initially assessed in a pretest and further posttested following the intervention of a musical approach to shared reading for the treatment group.

### *Overview of the Contrast Group Programme*

The Contrast group followed Holdaway's (1979) Shared Reading methodology for 15 minutes every day. It is divided into four stages: demonstration, participation, practice and performance. In the demonstration stage, the pace was lively with few stops so as not to interrupt the flow of language. The teacher pointed to each word, modelling print concepts such as directionality of print. At this stage, the teacher directed and guided exploration of the text. Next, the children participated in the reading and prediction was encouraged, but not to the detriment of the storyline. They negotiated meaning co-operatively, while the teacher induced active involvement. Choral participation was followed by individual repetition in familiar parts. During rereading the children were given opportunities to practice reading with expression and to recall new vocabulary. The teacher gradually lowered her voice to allow the children to dominate. Occasionally the teacher disengaged completely and rejoined as soon as the children began to struggle or lose confidence. In the final stage,

children performed by acting out the text, especially where dialogue appeared.

### *Overview of the Treatment Group Program*

The Treatment group also followed Holdaway's Shared Reading methodology. However, the addition of music was incorporated into all four stages of instruction for fifteen minutes daily. The story songs were introduced in the first stage (demonstration) by singing the lyrics, while the pupils looked at the text. In the participation stage, children sang as a class, looking at the text, while the teacher pointed to the words as they sang. In the practice stage, extra-linguistic support, such as actions, clapping, swaying and tapping of feet were used regularly to emphasis target vocabulary, which provided a kinaesthetic learning approach. In the performance stage, the pupils sang without looking at the print. Other activities included singing specific words in different pitches, playing percussion instruments on target vocabulary and tapping the rhythm of a sentence. The teacher created different ways of keeping the rhythm e.g. one group sang the story while another group tapped the beat on their laps.

### *A Description of the Texts Used*

The texts used in this study were in the form of big books. They enabled the whole class to comfortably engage with the text as the books, pictures and print were big. All texts chosen were repetitious in nature with simple sentence structures. Some were written in a rhyming pattern, which made them more suitable for bilingual learners. The print was large with colourful illustrations on most pages. The vocabulary and content was appropriate for first graders and contained many unfamiliar words. The sung and spoken version of each story was identical. The texts used with both groups were 'We're going on a bear hunt' by Rosen, 'Walking through the Jungle' by Lacome, 'The Gingerbread Man' retold by Daly, 'Old MacDonald Had a Farm' by Daniel, 'Sing a Song of Sixpence' by Adams, 'Ten in the bed'

by Dale, 'This Old Man' by Daniel, 'Farm Concert' by Cowley and 'Sing a song' by Cowley.

### *Testing Procedure*

The 'Spar' vocabulary knowledge standardised test consisted of fifteen pictures. Recognition of vocabulary was evaluated by looking at a picture and answering to the question, "What is this?" Children had to recognise the item in the picture and give the correct response orally. Any picture that was not attempted was counted as an error. The quantitative results were recorded and dated. The maximum time allowed for this test was four minutes. Following informed consent, the test was administered individually to both the Treatment and Contrast group children as a pre-test at the start of the study, and as a post-test, six months later. Both pre- and post-test administration was conducted in two sessions over a one-week period to ensure optimal validity of the data.

### **Results**

#### *Comparison and Analysis of Two Groups - Pre Test Scores*

The researcher wished to compare the scores of the two groups before the intervention, as marked differences in pre-test scores could affect analysis of scores on the post-test. Moreover, if the two groups were found to differ in vocabulary acquisition at the outset, as evidenced from the pre-test scores, then this would have a bearing on the conclusions that could be drawn. When the mean scores were calculated for both groups, it was noted that the Contrast group had a slightly lower mean. The difference in the means of the two groups was 3.3%, which was less than one correct answer. Additionally, when the results were subjected to a T Test to establish the significance of that difference, there was no significant difference found.  $T(1, 148) = 1.44$ ,  $p=0.15323986$ . Therefore, the scores had been generated from similar populations. (See Table 3)



The researcher considered that the two groups were matched well enough on vocabulary knowledge at the start of the study, to warrant comparison on a post - test at the end of the study.

Analysis of the children's responses by item on the Spar vocabulary knowledge test facilitated comparison of vocabulary knowledge levels for the two groups. The words that proved to be most difficult for both groups of children were 'hammer', 'screw', 'diver' and 'watch', especially children at the lower end of the scale.

#### *Comparison and Analysis of Two Groups: Post - Test Scores*

The researcher compared the scores of the two groups after the intervention. When the mean scores were calculated for both groups, it was revealed that the treatment group had a higher mean of 11.01 (73.42%) in comparison to the contrast group's mean of 8.08 (53.87%) This was a difference of 2.93 (19.56%). (See Table 2).

Both groups demonstrated increased levels of vocabulary knowledge at the end of the study, but the increase was greater for the Treatment group.

The mean gain scores of the Treatment and Contrast groups were also calculated, to compare the post-test and pre-test scores. (See Table 2) It was observed that the Treatment group made higher mean gains of 3.09 (20.62%). Although the mean average scores improved for the Contrast group with 0.59 (3.91%), the gains were not as high as that of the Treatment group.

#### *Testing the Null Hypothesis using the T Test*

The null hypothesis of the present study is:

'A musical approach to Shared Reading alone, has no effect on vocabulary acquisition, in an Arabic bilingual setting.'

The scores of the vocabulary test were subjected to the 'T test', which investigated whether or not the differences between pre- and post-test

means were significant. There was a significant difference when the Treatment and Contrast group scores were subjected to the 'T' test.  $T(1, 148) = 9.65, p = 2.11 \times 10^{-17}$ . As the 'p' value was less than 0.001, it can be concluded that the results were generated from dissimilar groups in the post-test. Consequently, the null hypothesis was strongly rejected. (See Table 3)

## **Implications for Research and Practice**

### ***Larger Research Project***

Since this study was a small-scale research project, involving a small sample size, design limitations place restrictions on its application to other populations and settings. However, the research could be repeated with a larger sample population, from a variety of other bilingual settings to see if these results are reflective of six year-olds generally. Additionally, it could be conducted over a longer time span, as a longitudinal study, involving a follow-up study of the two groups to investigate whether or not the Treatment group continued to display superior vocabulary knowledge as they continued throughout school.

### ***Assessment Measures***

There appears to be a lack of appropriate measures to assess vocabulary acquisition for second language learners. The vocabulary test used in this study was a standardized first language test. Future researchers may develop vocabulary tests specific to bilingual learners, not just to evaluate but also to monitor vocabulary acquisition in developmentally appropriate ways.

### ***Bilingual Publishing***

There has been an explosion of new books and new authors for young people in the past ten years. But this growth in children's publishing has not yet crossed over into publishing for bilingual Arabic / English learners. If more second language reading and language resources were published specific to the Arabic culture, then these children would be reading about experiences that were familiar to them. Using musical

approaches with these texts could be even more successful than the texts used in this study.

### *Physical Environment*

Children live in a colourful world, a world that is stimulating to the senses, with television, videos and computers to delight and excite them. The classroom, competing with this, needs to be interesting and inviting to encourage children to develop superior vocabulary knowledge. Teachers could create a Shared Reading area that is comfortable and stocked with musical instruments, story sacks and big books that would attract children's attention.

### *In-service Training*

Initial training could concentrate on using story song tapes, which would benefit teachers with limited singing experience. Further training would concentrate on the spontaneous use of percussion instruments for identifying key words and rhyming patterns. Cooperation and the sharing of ideas between teachers and music specialists could further enhance training. This recommendation has potential to have far-reaching effects on teaching and language learning.

### **Limitations of the Present Study**

In an educational setting, it is neither possible to control all extraneous variables nor to hold all such variables constant. However Cohen and Manion (1994) have cautioned about conditions that can threaten the validity of educational research, including maturation, testing and artificiality of setting. External events such as different teaching styles, one with the Treatment group and the other with the Contrast group may result in lack of control of some extraneous variables. To minimize this threat, both groups were tested at the same time of day, and on the same day of the week. Events arising at home, however, could not be controlled. Artificiality of setting was controlled for by using the children's own classrooms, when testing, thus ensuring a real-life

setting. In addition, the process of pre-testing at the beginning of an experiment could have produced a practice effect that may have made subjects more proficient in a subsequent test performance. However, since both groups were pre-tested, the researcher considered that this threat may have been minimized, as both groups had an equal chance of improving.

### **Final Thoughts**

Due to the fact that the levels of vocabulary knowledge of the two groups were similar at the start of the study, it was concluded that the greater gains of the Treatment group are attributable to factors other than maturation. The data would therefore, seem to suggest that this higher mean gain in vocabulary knowledge is linked to the intervention of a musical approach to Shared Reading for the Treatment group.

Learning a language is the job of a lifetime. Children who share books begin their journey early, knowing subconsciously, if not consciously, that they can make a go of language. Vocabulary knowledge should be taught through a meaningful context. Shared Reading can provide that context in a fun, non-threatening environment. This study has shown how a musical approach to Shared Reading can further enhance vocabulary knowledge. If music can set the stage for such learning, what are we waiting for?

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**Table 1: Two Intact Grade One Groups**

Group	Male	Female	Number of pupils
Treatment	43	32	75
Contrast	35	40	75

**Table 2: Comparison of Mean Gains in Spar Vocabulary Knowledge Test**

Group	Pre Test Mean	Post Test Mean	Mean Gain
Treatment	7.92 (52.8%)	11.01 (73.42%)	3.09 (20.62%)
Contrast	7.49 (49.96%)	8.08 (53.87%)	0.59 (3.91%)

**Table 3: T-test on Pre- and Post -Tests**

	n	Mean	SD	T Value	Significance
Pre-test					
Treatment	75	7.92	1.79	1.44	P=0.1532398 6
Contrast	75	7.49	1.84		
Post-test					
Treatment	75	11.01	2.02	9.65	P=2.11 x 10 <sup>-17</sup>
Contrast	75	8.08	1.8		