

The effects of child-initiated singing activities through the literature approach on children's music concepts*

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Abstract

This study was conducted in order to verify differences of the impact between child-initiated singing activities and teacher-initiated singing activities on building children's musical concepts. During the child-initiated singing activities, children actively created songs, added various rhythms and melodies to their songs, and participated in singing activities with a positive attitude through cooperative interactions with teachers. Participants were 60 children, all five years old, attending a kindergarten in a middle-class residential area in Seoul, Korea. Child-initiated singing activities were utilized for the experimental group, and teacher-initiated singing activities for the comparison group. Children were given pre- and post-tests to measure their ability to understand musical concepts with the Project Spectrum Assessment of Music Domain (Krechevsky, 1998).

The collected data was coded for the SPSS software (SPSS Inc., Chicago, IL) and analyzed by an analysis of covariance (ANCOVA). The data analysis showed a significant difference between the experimental group and comparison group. The experimental group, which experienced child-initiated singing activities, displayed greater improvement in their understanding of musical concepts. According to our findings, child-initiated singing activities have a positive impact on building children's musical concepts.

Keywords: *child-initiated singing activities, teacher-initiated singing activities, musical concepts*

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Introduction

Throughout many societies, music is an important cultural element that involves and greatly affects not only professional musicians but also laymen. Compulsory music education is often the norm from early childhood. Musical literacy is the ability to understand and apply music in everyday life. This ability can be cultivated by increasing the understanding of musical concepts and developing a positive attitude toward the subject of music through activities with related musical content, such as singing, playing musical instruments, and listening to music (Haines & Gerber, 2000; MENC, 2005; Needly, 2001).

Singing activities, which comprise one of the most important music content areas, enable children to experience and develop musical literacy (Ahn & Kim, 2006; Paton & Christy, 2002) and appear to be the most frequently performed activities at educational institutions for children (The Education and Human Resources Development Ministry of Korea, 1998). Moreover, singing activities positively affect the growth and development of a well-rounded personality and help children understand musical concepts (Ahn, Kim, & Park, 2008; Choi, Song, Young, 2002; Shin, & Choi, 2005).

Teaching music based on the literature approach helps children learn a variety of creative ways to express their ideas and emotions. If used properly, literature can play a significant role in children's education and development. It also has a positive effect on children's musical concepts, as part of an integrated program. Utilizing a literature approach to teaching music does not merely help children acquire various vocabulary and enhance their ability to understand stories, but it also helps them develop a positive attitude toward music as a subject matter (Calogero, 2002; Barclay & Walwer, 1992). Some ways to incorporate literature in musical education include using children's poems or picture books, employing traditional songs or fairy tales, and utilizing books for beginning-level readers and other types of picture books. The integrative activities of literature and music using picture books have been proven to improve the musical abilities of a child (Ahn, Kim, & Park, 2008; Byun & Hyun, 2004).

In regard to teaching songs to a child using a literature approach, the extent to which he or she performs self-initiated roles can affect the child's musical development. Self-initiated learning means that the learner, as the main subject of perceiving knowledge, plans, performs, and evaluates the overall education (Oh, 2003). According to constructivism, a child's self-driven role becomes an important factor in building knowledge (Hong, 2004). Constructivists consider the child the main educational subject who actively constructs concepts. They also claim that empirical abstraction and reflective abstraction are interrelated in constructing knowledge (DeVries, Zan, & Hildebrandt, 2002). Empirical abstraction is envisioning the properties of an object through handling it directly and involves active participation, whereas reflective abstraction is the mental comprehension of the relationship between objects. These principles have significant meaning in children's music education and learning. In addition, since reflective abstraction does not occur through an instructional strategy, but through the child's perception (Wellhausen & Kieff, 2001), music activities need to be provided through a child-initiated approach rather than direct instruction or a teacher-initiated approach.

Cognitive scientists have also pointed out the importance of children's self-initiated learning (Newberger, 1997; Jensen, 1998). Caine & Caine (1994) and Jensen (1998) introduced the idea that the use of a child-initiated strategy in an emotionally stable environment without any stress catalyzes brain development. Furthermore, Kieff and Casbergue (2000) suggested that the self-initiated role and active learning are important, because they provide internal meaning to children and stimulate brain development by matching the brain's learning mechanism.

From the viewpoint of both constructivists as well as cognitive scientists, therefore, inducing a child's self-initiated role as a spontaneous character can enhance musical ability by providing singing activities based on a literature approach (Franklin & Richards, 1997; Robinson, Anderson, Porter, Hart, & wooden-Miller, 2003). 'Child-initiated' refers to the practice of allowing children to introduce activities according to their own needs and interests, while the teachers' role is to prepare the environment required by these activities and to interact with the children as a facilitator. On the other hand, 'teacher-initiated' refers to a strategy where the teacher

prepares the educational goals, contents, and methods in advance and leads the children's learning by concocting the most efficient teaching strategy (Klein, Hammrich, Bloom, & Ragins, 2000).

Therefore, child-initiated singing activities involve children actively creating songs, singing with variations in rhythm and melody, and participating in singing activities with a positive attitude through cooperative interactions with teachers. Teachers' roles in child-initiated singing activities are to provide materials, interact with and assist children while they create their songs, and reflect on their own roles in the activities. In contrast, teacher-initiated singing activities involve teachers providing a collection of self-composed or pre-existing songs and teaching the songs to the children.

Considering the importance of singing activities in children's music education, it is necessary to analyze, as an aspect of teaching-and-learning methodology, the differences between child-initiated singing activities and teacher-initiated singing activities, and their effects on musical ability. In addition, there have been few studies done on the effectiveness of singing activities based on the literature approach using Korean traditional fairy tale or nursery rhyme. Therefore, this study is designed to verify the effects of child-initiated singing activities that use a literature approach. The research question is as follows: Is there a significant difference between the musical concepts acquired by an experimental group in which child-initiated singing activities are performed, and those acquired by a comparison group using teacher-initiated singing activities, as measured by the Project Spectrum Assessment of Music Domain?

Method

Research Participants

Participants were 60 children, all five years old, attending "D" kindergarten in a middle-class residential area in Seoul, Korea. After eliminating individuals who were absent or gave disqualifying responses in pre and post study examinations, 30 children were selected for the experimental group and 30 individuals for the control group.

Child-initiated singing activities were utilized for the experimental group, and

teacher-initiated singing activities for the comparison group. All participants had previously experienced general singing activities in a child-centered educational program that followed the 6th kindergarten educational curriculum (The Education and Human Resources Development Ministry of Korea, 1998). However, they had never experienced singing activities based on literature, as described in this study.

Measure

Children were given pre- and post-tests on musical concepts with Project Spectrum Assessment of Music Domain (Krechevsky, 1998). The original steps and methods of Project Spectrum Assessment were administered. The original lyrics, rhythm, and melody of the song “Happy Birthday to You” were applied for the assessments because it is well-known to children in Korean as well as English. The children’s activities were videotaped and scored by an expert in music education.

Procedures

The following procedures were applied to the experimental and control groups:

- 1) Selection of Korean traditional fairy tales and nursery rhymes that consist of musical lyrics. Picture books related to Korean traditional fairy tales were selected:
 - a. The Red-Bean Granny and the Tiger
 - b. The Brother and Sister [who became the Sun and the Moon]
 - c. The Mole the Son-In-Law
 - d. The Goblin Cudgel [Club]
- 2) Story telling using fairy tales with picture books, and recalling the stories.
 - ① Use a [real-image] projector, reconstructed picture books, or flannel boards for storytelling, considering the large size of the participant groups.
 - ② Guide the children in recalling the stories in detail.

3) Instructional application

< Experimental Group >

- ① Guide the children in composing lyrics using the content of the fairy tales.
- ② Apply simple rhythm and rhythm patterns to the lyrics with rhythm cards chosen by the child, and sing together.

Example of lyric : Pat-Zook Han-Gue-Reut

Example of Rhythm : 2 beats/ 3 beats/ 4 beats etc.

Rhythm patterns : Add musical notes (2 quarter notes, 2 eighth notes, and 1 quarter note)

Example of teachers questions : “Let’s add different musical lengths to your lyrics. What kind of rhythm would you like to create?”

- ③ Assist the children in adding melody to the rhythm and encourage them to sing the melody together.

Example of lyric : Pat-Zook Han-Gue-Reut

Example of melody : Sol-mi/ sol-mi-ra [G-E / G-E-A]

- ④ Guide the children in singing the song with various rhythms and melodies and determine which rhythm and melody to select for the song after listening to the recordings of their improvised songs.
- ⑤ After determining the details of the song, guide the children in creating the musical score and provide any necessary material and assistance.
Example of teacher’s question : “How can we all sing along with your song? How shall we make the musical score?”
- ⑥ When completed, sing the song together as suggested by the children. (singing with “ah” sound, singing with “la” sound)
- ⑦ As the song becomes familiar, switch the lyrics or melody and sing together.
- ⑧ As the song becomes familiar, provide multiple rhythmic instruments and let the children play them while singing.
- ⑨ The children can also create choreographic or rhythmic movements to the song and perform them while singing.

<Comparison Group>

- ① Play a song composed by adapting the fairy tales as a motive.
- ② Show the children a musical score with pictures.
- ③ Have the children examine the colors of the sticks on the musical score by their lengths and heights.
- ④ Sing the song with a humming sound (“ah” or “la”).
- ⑤ Sing the song with lyrics and discuss any feelings about the song.
- ⑥ Sing together with children while looking at the musical score.

4) Teacher training

Four teachers participated in this study. All four teachers graduated from a four-year college and majored in early childhood education. They had some experience educating children in music during a student teaching course. They also had three to five years of teaching experience. None of the teachers had received any additional training on music education. Prior to the research experiment, the teachers of the experimental group were instructed on music education, with emphasis on the importance of singing, constructivism theory, cognitive-scientific approach to the child-initiated learning, and the child-initiated singing activities. During the training, an emphasis was placed on the role of the teacher in creating an environment where they can interact with children, think reflectively, and encouraging children to create lyrics, rhythm, and melody after hearing Korean traditional fairy tales. The teachers were trained through interviews regarding the usage of an image projector, a beam projector and PowerPoint presentation, modeling, and discussions. The training was nine hours long, split into three sessions over a two-week period.

5) Pretest

Sixty children were pretested on their knowledge of musical concepts using the Project Spectrum Assessment of Music Domain (Krechevsky, 1998).

6) 16 Weeks of Treatment

The experimental group participated in child-initiated singing activities, and the

comparison group was engaged in teacher-initiated singing activities.

7) Post-test

Sixty children were post-tested using Krechevsky's (1998) Project Spectrum Assessment of Music Domain after the child-initiated and the teacher-initiated singing activities were completed.

Data Analysis

The collected data was coded for the SPSS software (SPSS Inc., Chicago, IL), and was analyzed by an analysis of covariance (ANCOVA).

Results

The effects of child-initiated and teacher-initiated singing activities on children's musical concepts.

Table 1. *Pre-test between the Experimental and Control Group*

Item	Group (N)	Mean (SD)	t-value
Unit	experimental group(36)	3.92 (0.28)	0.82
	control group (34)	3.85 (0.36)	
Group	experimental group (36)	2.25 (1.59)	1.43
	control group (34)	1.71 (1.59)	
Time	experimental group (36)	2.00 (1.39)	1.47
	control group (34)	1.50(1.44)	
Precision	experimental group (36)	1.44(1.40)	1.90
	control group (34)	.82 (1.34)	
Contours	experimental group (36)	4.00 (0.00)	1.73
	control group (34)	3.88 (0.41)	
Tune	experimental group (36)	0.33 (0.79)	1.64
	control group (34)	0.09 (0.38)	
Melody	experimental group (36)	0.25 (0.73)	0.45
	control group (34)	0.18 (0.63)	
Total	experimental group (36)	4.58 (1.34)	1.59
	control group (34)	4.15 (0.93)	

Since the value of t for all categories from the unit of rhythm and total does not surpass $p < 0.05$, it can be said that the two groups are homogeneous.

Table 2. *Experimental group and Control Group's Average and Standard Deviation of Post Music Concepts*

Item	Group (N)	Post music concepts Mean (SD)
Unit	experimental group (36)	4.00 (0.00)
	control group (34)	3.82 (0.46)
Group	experimental group (36)	3.64 (0.96)
	control group (34)	2.41 (1.40)
Time	experimental group (36)	3.92 (0.37)
	control group (34)	2.29 (1.47)
Precision	experimental group (36)	3.56 (1.08)
	control group (34)	1.88 (1.47)
Contours	experimental group (36)	4.00 (0.00)
	control group (34)	3.91 (0.29)
Tune	experimental group (36)	1.42 (1.18)
	control group (34)	0.47 (0.99)
Melody	experimental group (36)	1.56 (1.34)
	control group (34)	0.58 (1.18)
Total	experimental group (36)	6.97 (2.06)
	control group (34)	4.97 (2.11)

The comparison of each group's musical concepts shows that the experimental group received higher scores than the control group in all categories. An analysis of covariance was used to verify significance difference in scores. Since individuals may vary in their musical concepts, the initial musical concepts were measured for the analysis of covariance. In addition, the control group was taught with different techniques as an independent variable to evaluate the difference of scores more accurately in post musical concepts.

The analysis of covariance showed no difference between the experimental and control group in the 'unit' of rhythm. However, the difference in the 'group' of rhythm was significantly higher at $p < 0.01$ level in the post-test of the experimental group. This proves that the child-initiated singing activities effectively improved children's musical concepts.

Table 3. *ANCOVAs between the Experimental and Control groups*

Item	Source	Type III Sum of Squares	df	Mean Square	F
Unit	Corrected Model	640	2	0.320	3.140*
	Intercept	82.765	1	82.765	810.080***
	Covariance	0.96	1	0.96	0.938
	between group	0.396	1	0.396	3.875
	Error	6.845	67	0.102	
	Total	1080.000			

Note R2 = .086 (Adjusted R2 = .058).

Group	Corrected Model	37.148	2	8.574	14.517***
	Intercept	16.932	1	16.932	13.234**
	Covariance	10.817	1	10.817	8.454**
	between group	16.596	1	16.596	12.971**
	Error	85.724	67	1.279	
	Total	771.000	70		

Note.R2 = .302 (Adjusted R2 = .282).

p < .01, *p < .001.

Item	Source	Type III Sum of Squares	df	Mean Square	F
Time	Corrected Model	49.859	2	24.929	23.203***
	Intercept	31.184	1	31.184	29.025***
	Covariance	3.825	1	3.825	3.560
	between group	36.265	1	36.265	33.754***
	Error	71.984	67	1.074	
	Total	807.000			

Note R2 = .409 (Adjusted R2 = .392).

Precision	Corrected Model	66.380	2	33.190	23.410***
	Intercept	6.405	1	6.405	4.518*
	Covariance	17.427	1	17.427	12.292**
	between group	31.777	1	31.777	22.413***
	Error	94.991	67	1.418	
	Total	688.000	70		

Note.R2 = .411 (Adjusted R2 = .394)

*p < .05, **p < .01, ***p < .001

Analysis on covariance showed similar results in both categories 'time' and 'precision' at the p<.001 level.

Item	Source	Type III Sum of Squares	df	Mean Square	F
Contours	Corrected Model	0.213	2	0.106	2.678
	Intercept	85.289	1	85.289	2149.177***
	Covariance	0.076	1	.076	1.926
	between group	0.080	1	0.080	2.008
	Error	2.659	67	0.040	
	Total	1099.000	70		

Note.R2 = .074 (Adjusted R2 = .046).

Tune	Corrected Model	19.514	2	9.757	8.451**
	Intercept	0.147	1	0.147	0.127
	Covariance	3.863	1	3.863	3.326
	between group	10.839	1	10.839	9.388**
	Error	77.357	67	1.155	
	Total	161.000	70		

Note.R2 = .201 (Adjusted R2 = .178).

Item	Source	Type III Sum of Squares	df	Mean Square	F
Melody	Corrected Model	35.159	2	17.580	13.024***
	Intercept	2.493	1	2.493	1.849
	Covariance	18.798	1	18.798	13.943***
	between group	7.555	1	7.555	5.604*
	Error	90.327	67	1.348	
	Total	208.000	70		

Note.R2 = .280 (Adjusted R2 = .259).

*p < .05, **p < .01, ***p < .001

Analysis on covariance showed no difference between the test and control group in 'contours'.

The difference seen in 'tune' was at p<0.01 level and after the evaluation of the post average results the test group showed higher scores.

Item	Source	Type III Sum of Squares	df	Mean Square	F
Total	Corrected Model	113.322	2	56.661	15.024***
	Intercept	64.636	1	64.636	17.139***
	Covariance	43.265	1	43.265	11.472**
	between group	39.981	1	39.981	10.601*
	Error	252.678	67	3.771	
	Total	2886.000	70		

Note.= .310 (Adjusted R2 = .289).

*p < .05, **p < .01, ***p < .001

The analysis of covariance showed similar results in both categories ‘melody’ and ‘total’ at the $p < .05$ level. The data analysis showed that there were significant differences between the experimental group and the control group, with the only exceptions being in the units of rhythm and contours of tune among musical concepts. The experimental group, which experienced child-initiated singing activities, displayed great improvement in their knowledge of musical concepts.

Conclusions and Implications for Music Education

The purpose of this study was to verify the difference of the effects between child-initiated singing activities and teacher-initiated singing activities through the literature approach on the formation of musical concepts. The result shows that the child-initiated singing activities are more effective in learning musical concepts than the teacher-initiated activities. There are several insights that can be derived from this study.

First, the fact that the child-initiated singing activities had a positive effect on learning musical concepts supports the theory of constructivism, which states that the construction of knowledge is possible only when an educational activity is self-initiated by the children (Wellhousen & Kieff, 2001). According to the constructivist theory, learning takes places most efficiently when the children must take the initiative in choosing and performing activities, and the teacher’s role is to provide an environment that allows the children to maintain the initiative.

Second, the musical concept of pitch showed no significant difference between the child-initiated singing activities and teacher-initiated singing activities, while the difference in the group of rhythm was significantly higher in the post-test of the children in which child-initiated singing activities are performed. This result suggests that children tend to find it easier to add rhythms to their songs than pitches.

Third, the positive effects of child-initiated singing activities on building musical concepts is mainly attributable to the teaching strategy which encourages children to create their own music. The result of this study gives reason to emphasize the teachers facilitating role in children’s learning as a key factor. An important aspect of

education that was focused on in this study was a teaching method that encourages children to create their own lyrics, rhythm, and melody in the process of creating a song. The teacher provided the learning environment and interacted with the children by making constant observations and asking thought-provoking questions during the learning activities. The teachers also reflected on whether they had effectively performed their roles in the children's music activities.

Fourth, the experimental aspect of this study is based on a literature approach using picture books including Korean traditional fairy tales and nursery rhymes. These tales and rhymes served as a motivational element for the child-initiated activities, because they contain Korean traditional emotions and mentality found in everyday life, as well as metrical rhythms that facilitate easy adaptation into songs. In fact, when the fairy tales were introduced with picture books, children in both the child-initiated singing activity group and the teacher-initiated singing activity group showed considerable interest in the activities. The children in the child-initiated singing activity group who actively participated in composing a song made the best use of the metrical system. The results of this study partly support Shin & Choi's study (2005) in that children's creation of lyrics had a significant effect on children's tonal aptitudes. They are also in accordance with Sims (1995), which concluded that activities of children's singing and listening to music on their own had a significant effect on children's music ability. Moreover, this study supports the conclusion of Ahn, Kim and Parks study (2008), that child-initiated roles of creating lyrics, rhythm and melody after reading a literary work to create a musical drama produced significant improvement in children's tonal audition.

Therefore, the findings of this study support the assertion that child-initiated singing activities promote the formation of musical concepts, enhancement of children's musical ability, and maximization of children's potential musical literacy. Consequently, an expected result of this study is a shift in teaching method among kindergarten-level teachers as they turn their attention to more child-initiated singing activities. When applying the results of this study, one must always remember that not all children may learn effectively from the same teaching-learning strategy. Because children have a variety of learning patterns and different levels of develop-

ment and personality, the most desirable teaching - learning strategy should be selected for each individual.

In order to generalize the results of this study, there is a need to increase the sample size. In addition, long term qualitative studies on children-initiated music learning and the roles of the teachers in such activities are recommended for later studies.

References

- Ahn, G. S., & Kim, S. H.(2006). *Developmentally appropriate singing program for young children*. Seoul : Yangseowon, Inc.
- Ahn, G. S., Kim, S. H., & Park, J. S.(2008). The development of children's initiated musical drama activity with creative story songs based on children's literature and the effect on children's tonal audition and rhythmic audition. *Korean Journal of Research in Music Education*, 34, 59-85.
- Barclay, K. D., & Walwer, L. (1992). Linking lyrics and literacy through song picture books. *Young Children*, May, 76-75.
- Byun, Y-H & Hyun, E-J. (2004). The effect of an arts education program using picture books on young children's creativity. *Korean Journal of Early Childhood Education*, 24(5), 311-335.
- Caine, R. N. & Caine, G. (1994). *Making connection*. NY: Addison-Wesley.
- Campbell, P. C., & Scott-Kassner, C. (2006). *Music in childhood from preschool through the elementary grades*. Belmont, CA : Thomson Schirmer. Canary.
- Choi, M. S., Song, S. S., & Jung, Y. H. (2002). The effect of traditional play song program in the reduction of children's stress. *Journal of Future Early Childhood Education*, 9(2), 137-158.
- DeVries, R., Zan, B., Hildebrandt, C., Edmiason, R., & Sales, C. (2002). *Developing constructivist early childhood curriculum*. NY: Teachers College Press.
- Franklin, B. X. & Richards, P. N. (1997). Effects of children divergent production. *British. Journal of Educational Psychology*, 47, 449-127.
- Gmitrova, V, & Gmitrov, J. (2003). The impact of teacher-directed and child-directed

- pretend play on cognitive competence in kindergarten children. *Early Childhood Journal*, 30(4), 241-246.
- Haines B. J., & Gerber, L. L. (2000). *Leading young children to music*. Upper Saddle River, New Jersey : Merrill an Imprint of Prentice Hall.
- Hong, K. C.(2004). The analysis of learning ability and the development of learning model for constructive self-directed learning. *The Korean Journal of Educational Psychology*, 18(1), 75-98.
- Jensen, E. (1998). *Introduction to brain-compatible learning*. CA: The Brain store. Inc.
- Kieff, J. E., & Casbergue, R. M. (2000). *Playful learning and teaching: Integrating play into preschool and primary program*. Needham Heights, MA: Allyn & Bacon.
- Klein, E. R., Hammrich, P., Bloom, S., & Ragins, A. (2000). *Language development and science inquiry : A child-initiated and teacher-facilitated program*. Temple University Center for Research in Human Development and Education, Publication Series, No2.
- Krechevsky, M. (1998). *Project spectrum : Preschool assessment handbook*. NY : Teachers College Press.
- MENC(2005). The K-12 national standards, PreK standards, and what they mean to music educators. (Available on-line at <http://www.menc.org/publication/books/prek12st.html>)
- Needly, L. P. (2001). Developmentally appropriate practice : Children learn what they live. *Young Children*, 56(3), 32-37.
- Newberger, J. J (1997). New brain development research: A wonderful window of opportunity to build public support for early childhood education. *Young Children*, 52(3), 4-9.
- Oh, S. (2003). An investigation on early childhood initiativeness education. *The Journal of Korea Open Association for Early Childhood Education*, 8(3), 227-251.
- Paton, J. G., & Christy, V. C. (2002). *Foundations in singing*. NY : McGraw-Hill.
- Shin, I. S. & Choi, J.J. (2005). The effects of songs with and without words on the

- enhancement of young children's rhythmic and tonal aptitudes. *Journal of Future Early Childhood Education*, 12(1), 1-23.
- Sims, W. L. (1995). Children's ability to demonstrate music concept discriminations in listening and singing. *Journal of research in music education*, 43(3), 204-221.
- The Education and Human Resources Development Ministry of Korea(1998). *The sixth Kindergarten Curriculum*. Seoul : EHRDM.
- Wellhousen, K., & Kieff, J. (2001). *A constructivist approach to block play in early childhood*. Albany, NY: Delmar.