

# **Fostering the musical skills of children and their teachers through a newly designed music program**

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## **Abstract**

Classroom teachers with little formal musical training face a challenge in teaching music to preschool and primary school children. A new music program, First Note™, was developed to address this issue and tested with 130 children and their teachers participating in a pilot study. Measurements were conducted before and after the program. The children were asked to evaluate their own skills in rhythm, pitch, instruments, and music cultures, while teachers evaluated their own competence in teaching these musical domains. Children additionally provided general opinions related to music and school, and teachers about their general competence and attitudes for teaching music. Results showed significant increase in the children's self-perceived abilities in instruments and music cultures, while the teacher's self-perceived teaching skills increased significantly in all of the four domains. The children's desire for music and the teacher's perceived importance of music were already high before the program and did not change during the study. Additional significant improvement was found in relation to the children's attitude towards school and their family's encouragement for their music making.

## **Keywords**

Music, Kindergarten, Curriculum, Early-Learning, Musical skills

## **Introduction**

### **Children's musical development**

Children are intrinsically drawn to music. However, aspects of their social environment including opportunities for exploring music, supportive attitude, and educational competence are also crucial in fostering their interest and musical ability. The period when children enter school is relevant for educational competence as this age contains increased differences in skills and changes in learning attitudes. Children go through a transition from young childhood's spontaneous enjoyment of free experimentation with music towards later childhood's interest in learning the patterns and conventions of surrounding culture (Gardner, 1973, updated 1994; Hargreaves, 1996; Swanwick & Tillman, 1986). Furthermore, at this age, children exhibit great individual differences in their development, not only regarding the change in attitude but also regarding musical skills related to the perception and production of musical elements, including pitch, rhythm, and harmony (Hargreaves & Galton, 1992; Hargreaves, 1996). Meanwhile, regarding children's socio-emotional development, this period is important for developing a sense of competence, which depends on experiences of accomplishment, capability, and personal abilities relative to other children (e.g. Erikson, 1980). Thus, this age period sets a requirement on the music teacher's ability to facilitate such shared musical activities that enable children with various musical skill levels to have self-confidence supporting experiences of learning and mastering.

### **The First Note Music program**

Despite the need for educational competence in teaching music to preschool and primary school children, music continues to play a minor role in primary school teacher training in many countries. Simultaneously, existing music programs for classroom use are designed for trained or certified music instructors and can be costly. And even then, few programs exist for students aged 3-6 years. First Note was created to address this issue and offer an affordable program that virtually anyone could

facilitate. The 30-lesson program contains a teacher's manual with video support and all the tools needed to facilitate a full-year beginner's music curriculum.

### **Aim of the study**

The current study was aimed at evaluating the effectiveness of the First Note Music program in helping teachers to develop children's musical skills. We gave voice to the children themselves and measured their self-perceived competence in music. Additionally, we explored whether the teachers perceived the program useful in advancing their own competence in teaching music. The study thus included two research questions: 1) How did the program influence children's self-perceived music skills and attitudes? And 2) How did the teachers perceive the influence of the program on their teaching?

### **Method**

#### **Participants**

130 children and their teachers from six schools participated in the study. The children were 4-7-year-olds (mean age 5.42, sd .91), including 69 boys (53%). The children had practically no formal musical training prior to First Note. All teachers taught children aged 3-7. Some were special education teachers, and some had in-school support from a certified music teacher but most not. 31 teachers implemented the program, with ten of them providing questionnaire data for the study. Schools included both public and private schools with one school having a public/Montessori school mix.

#### **Children's self-evaluation measures**

A brief, age-appropriate, and easy-to-answer questionnaire was designed to assess children's self-perceived musical skills and attitudes. Each child completed the questionnaire at the beginning and end of the program together with a teacher. Answers were given on a 5-point scale of smiley faces with a happy face referring to agreement and perceived competence and a sad face referring to

disagreement and perceived incompetence. The first 4 questions concerned musical abilities, including rhythm, pitch, instruments, and music culture (Figure 1).

MUSICAL ABILITY: How would you describe your skills in...

...PITCH / IN TUNE SINGING? (That is, I can differentiate high and low sounds and I can sing a melody)



Figure 1. Example of a question for self-perceived ability in musical pitch. The question was read by the teacher while the child answered by showing a face on the scale.

The latter 4 questions concerned social aspects and attitudes towards learning music and being in school, consisting of: 1. How do you feel about singing and making music?, 2. Is your family encouraging your music making?, 3. How do you feel about your school?, and 4. How do you feel about the other children in your class? Answers were given on the smiley face scale described above.

### **Teacher's self-evaluation measures**

Teachers filled out a questionnaire about self-perceived competence and interest in teaching music at the beginning and end of the program. The first 4 questions concerned competence in teaching the same four musical aspects asked of the children (rhythm, pitch, instruments, and music culture). Answers were given on a 5-point scale ranging from *I'm not too confident about my skills in this particular area* to *I'm highly confident about my skills in this particular area*. The following 3 questions were asked regarding general motivation and competence in teaching music: 1) How much do you *like* teaching music?, 2) How *confident* are you about teaching music?, and 3. How *important* do you think music lessons are? Answers were given on 5-point scales ranging from low to high. In addition, teachers wrote short descriptions about their experiences of how the program worked, how it influenced the children, and how it influenced their teaching.

### **The music program**

The First Note Music Curriculum consists of 30 sequential lessons, facilitated through a series of videos, and a teacher's manual. The video portion features a certified music instructor "Miss Melody" and 4 young children "Music Friends" whom the classroom students mirror or echo. Each lesson begins with a short physical warm up exercise and a review of the previous lesson, and then a new concept with a reinforcing activity is introduced. The video then pauses to allow the classroom teacher to lead the class in the activity/song just seen or a creation of their own that supports the new concept. Each lesson has between 4 and 5 of these pause points and then ends with a video "visit" from a cultural guest who introduces a new instrument. The lesson ends with a review by Miss Melody. The program was delivered to students as designed and described above.

## **Analyses**

Repeated-measures analyses were conducted using PASWStatistics 18.0. Within-subject MANOVA's were calculated for dependent variables assumed to moderately correlate (the self-perceived abilities in the four musical domains), while separate questions regarding attitudes were investigated through individual paired-sample t-tests. Teacher's comments were briefly qualitatively analyzed for identifying the key judgments about the program's applicability.

## **Results**

### **Children**

Means, standard deviations, and significance test results for variables related to children's musical abilities and attitudes are presented in Table 1. All mean scores increased from pre to post measurements, but the difference was statistically significant only for some. The musical abilities differed significantly between the measurement times,  $F(1, 4) = 3.29, p < .05$ ; Wilk's  $\Lambda = .82$ , partial  $\eta^2 = .19$ , and subsequent pairwise tests showed that the improvement was significant for instruments and culture, not for rhythm and pitch. As regards attitudes, significant improvement was observed for family support and school attitude, not for liking music or peers.

Table 1. Children's self-perceived musical abilities and attitudes prior to and after the music program

	<b>Pre</b> mean (sd)	<b>Post</b> mean (sd)	<b>t</b>	<b>df</b>	<b>p</b>
<b>Musical ability:</b>					
Rhythm	4.60 (1.04)	4.63 (.69)	-1.38	72	.171
Pitch	4.24 (1.30)	4.44 (.93)	-1.06	74	.292
Instruments	4.35 (1.23)	4.77 (.65)	-3.20	66	.002
Culture	3.89 (1.46)	4.61 (.84)	-4.03	72	.000
<b>Attitudes:</b>					
Liking music	4.60 (.92)	4.71 (.62)	-1.14	76	.257
Family support	4.19 (1.33)	4.58 (.84)	-2.14	73	.036
School attitude	4.38 (1.24)	4.68 (.65)	-2.38	76	.020
Peers	4.48 (1.01)	4.63 (.84)	-1.26	75	.212

## Teachers

Means, standard deviations, and significance test results for teachers' abilities and attitudes are presented in Table 2. Ability for teaching the four musical domains improved significantly,  $F(1, 4) = 3.29, p < .05$ ; Wilk's  $\Lambda = .82$ , partial  $\eta^2 = .19$ , and subsequent pairwise comparisons showed that the difference was significant for all domains. As regards attitudes, significant improvement was found for liking and confidence, but not for the importance of teaching music.

Table 2. Teachers' self-perceived abilities and attitudes for teaching music prior to and after the music program

	<b>Pre</b> mean (sd)	<b>Post</b> mean (sd)	<b>t</b>	<b>df</b>	<b>p</b>
<b>Musical ability:</b>					

Rhythm	3.00 (1.05)	4.10 (.74)	-3.97	9	.003
Pitch	1.80 (1.03)	3.30 (1.25)	-5.58	9	.000
Instruments	2.40 (1.17)	4.20 (.92)	-4.32	9	.002
Culture	2.78 (1.48)	3.89 (.78)	-3.16	8	.013
Attitudes:					
Liking	3.22 (1.09)	4.00 (.71)	-2.80	8	.023
Confidence	2.67 (1.22)	3.67 (.71)	-3.00	8	.017
Importance	4.56 (.73)	4.67 (.71)	-.56	8	.594

The qualitative results showed that the teachers found the program useful, fun, and easy to use, with only minor suggestions for improvement (e.g. adding lyrics to videos). Teachers reported effects on children's improved musical abilities, program enjoyment, and some transfer-effects with general competencies, such as in the quote below:

First Note had a positive impact on the students. A new group of students got to excel at rhythm and beat than excel at say reading. This helped gain their confidence. This confidence transferred into other subject areas. There was also a noted improvement in the students' musical ability. In the beginning, they were just banging sticks together but, by the end, they had real rhythm.

However, even more pronouncedly than the effect on children the teacher comments were illustrative of finding the program useful in developing their own abilities in teaching music:

I loved the program! I am NOT knowledgeable about music and this program made it really easy to teach.

The program was supportive to helping me help the children learn.

## Discussion

The results showed significant increase in the children's self-perceived musical skills, particularly regarding instruments and music cultures. This emphasis may relate to the program's design of

presenting new musical material through “guests” coming from different cultures. It may also have been easier for the children to evaluate their skills in these concrete domains instead of the more abstract concepts of rhythm and pitch. In comparison, the teachers’ self-perceived teaching skills improved in all musical aspects, and the teacher comments indicated that the children also did learn skills related to melody and rhythm.

Children’s overall attitude towards school improved. Although it is difficult to say how much of this was due to the First Note program, the comments from teachers did support the idea of some competence-related transfer effects occurring. Children’s relationship to peers did not change, but significant increase was found in how much their family encouraged their music making. This is important, since parental support is crucial for fostering musical engagement.

Finally, it seems that the program was particularly valuable in helping teachers to gain competence and skills for their own teaching. The only item showing no significant change was the perceived importance of music, which already received high ratings from teachers prior to the program starting. All other aspects improved significantly, and the value of the program for developing one’s teaching skills in music was further supported by the comments.

For more information about the First Note program visit [www.cmfinc.org](http://www.cmfinc.org).

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