Effects of a Music Composition Intervention on Elementary School Children

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Abstract

The present study aims to contribute to the understanding of the effects of music education, in particular music composition as a classroom activity in elementary schools. The intervention (experimental condition) focused on a three-step-model for music composition, based on the Cultural Historical Activity Theory of education, and has been compared with a teacher-centered approach mainly based on students’ reproduction of music (control condition). Results indicated that after the six-month intervention period, students in the experimental group were more engaged in music education as compared to students in the control group. The research didn’t show a statistical difference in learning outcomes with regard to intelligence, academic achievement and music achievement, although the students of the experimental group performed better with regard to reading comprehension than their counterparts in the control group. The authors conclude that music composition as a classroom activity is feasible and useful in elementary schools.

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Keywords: Music composition; children
1. Introduction

For a long time, music educators and researchers have suggested that music, either in the form of music education, music practice, or exposure to music, can have a significant impact on school achievement, school attendance rates, and student conduct, both in elementary and secondary school (Waller, 2007; Koopman, 2005).

2. Problem Statement

The question is however if these claims find support in available scientific studies. Besides music educators and musicians, educational researchers have considered the question of what effects music education can have on child development. Some researchers claim to have found effects on cognitive functioning, such as the increase of concentration and academic achievement, in addition to effects in the social and emotional domain (Elliott, 1995; Gardner, 2004).

3. Research Questions

The aim of the present study is to gather empirical evidence with regard to the effects of productive music education on engagement in music education and both music and academic achievement. Our main research question is: “What are the effects of music composition as a classroom activity on engagement in music education and on academic and music achievement?” The authors specifically investigated the effect on academic and music achievement of productive music education on elementary school students, as compared to a teacher-centered approach mainly based on reproduction of music with regard to singing, playing instruments, and music and movement. Engagement in music education means that students are able to, and motivated to, participate in music activities.

4. Purpose of the Study

Given the main research question concerning music composition as a classroom activity (productive music education) a study was set up to the effects of music composition as a classroom activity on engagement in music education, music achievement, and academic achievement. In the present study two formats of music education: productive music education with composition as a classroom activity as core activity (designated as experimental condition), and a teacher-centered approach mainly based on reproduction of music (designated as control condition) were compared. Active music listening, and music and movement were important elements of both interventions.
5. Research Methods

A randomized groups pretest-posttest-follow up design was used for this study. Although the students were not randomly assigned to the experimental and control group, the classes were. The two music interventions were implemented in 18 weekly lessons of 45 minutes each. The lessons were given on a weekly basis. Pre-test data on singing, listening, intelligence, language, reading comprehension, and mathematics were collected during the first two weeks of the school year, starting in September 2010. Post-test data on the same variables were collected six months later, right after the intervention. Follow-up data were collected at the end of the school year, five months after the intervention.

6. Findings

The overall results of the present study comparing two types of music education, an intervention that showed the following: First of all, the study demonstrates positive effects on students’ engagement in both types of music education, but larger effects in the music production condition, which confirms the hypotheses that music production would lead to more engagement in students than music reproduction. Secondly, this study does not support the hypothesis that music education contributes to nonverbal intelligence and no differences were found between students in the music production condition versus students in the reproduction condition. This deviates from the findings reported by Bastian (2002) in which significant positive effects of music education on intelligence has been reported. Thirdly, the findings of this study partly confirmed Hypothesis 3: The students of the experimental group performed better with regard to academic skills than the control group than their counterparts in the control group, at least such an effect has been found for reading comprehension. It remains uncertain to what this difference should be attributed. One possibility is that students in the experimental group have made extensive use of musical notations for their compositions, and a transfer to reading comprehension could have taken place. Fourth, although both groups showed progress in this respect, no significant difference between both groups on singing was found, such despite the fact that the control group sang much more than the experimental group. This might indicate, since relevant variables here are melody and rhythm performance, as well as expression and comprehensibility, that these can apparently also be improved by non-singing music activities. Fifth, students in the experimental group showed a tendency for better musical abilities, especially listening (instrument & ensemble discrimination/ recognition, and audiation), although this difference from the control group did not reach statistical significant difference. In other words: hypothesis 4 was disconfirmed. A possible explanation for this
difference, although weak, could be that composition as a classroom activity may demand more of students’ deep-level listening processes than performing music.

7. Conclusions

In conclusion, this study highlights the surplus value on several dimensions of composition as a classroom activity, such as engagement, certain academic benefits, such as reading comprehension, and possibly audition. Furthermore, this study has shown that music composition is feasible and useful in elementary school. Students are able to compose music like they are able to sing songs, play instruments and perform dances. The authors of this study conclude that productive music education is evidently more engaging for students than reproductive forms of music education. However, productive music education requires different pedagogical-, didactical-, organizational-, and reflective skills of teachers’ to competencies, than reproductive music education. For example, using forms of cooperative learning and differentiated instruction. This has consequences for teacher education. The value of these findings are substantiated by the fact that the current study meets scientific standards (Slavin, 2008) with regard to: (1) Randomized assignment: classes were randomly assigned to the experimental and control group;

(2) Sample size: 131 students participated in this study; and (3) Duration: the study lasted 10 months. Nevertheless, there are a number of limitations to this study. First of all, randomization was only at a level of classes and not students, neither school. Secondly, both interventions were carried out by the same teacher. A possible proclivity towards one or the other approach to music education cannot be excluded as having affected the outcomes. Third, it can also not be excluded that differences between both conditions had to do with other factors than the presence or absence of composition as an activity. For example, music composition might require different forms of interaction between teacher and students than reproductive music activities. Notwithstanding these possible limitations, the findings with regard to engagement and certain academic skills, such as reading comprehension skills at a favor of music education by composition, are intriguing enough to warrant further research and reconsideration of the content of music education in elementary schools.
References


