

Effect of Singing Instruction on the Singing Voices of Children Ages 5-8

By Chet-Yeng Loong

Author Note

Chet-Yeng Loong is certified in all levels of the Kodály Method and Orff-Schulwerk. She has presented at local, state, regional, national, and international conferences. Her research on early childhood and elementary music has been published in several leading journals. Currently, Chet-Yeng serves as chair of the music education area at the University of Hawai'i, president of the Hawai'i Music Education Association, and editorial board member of *The Orff Echo*.

Abstract

This document contains the complete study results, which are the basis for the research article, *Effect of Singing Instruction on the Singing Voices of Children Ages 5-8*, published in the Summer 2017 issue of *The Orff Echo* (49:3).

Study Results

Five *t* tests with dependent samples were used to analyze all data. The independent variables were groups and setting (pre- and posttests). The dependent variables were subjects' individual singing scores.

In the first analysis, the 53 subjects had an average difference from pretest to posttest scores of -1.38 (*SD* = 2.11) when singing all three assigned songs, indicating a significant difference ($p < .05$) was found between pre- and posttests, $t = -4.60$, $p = .00$ (two-tailed) (See Table 1). The mean score of all subjects in the pretest was 4.42, which was significantly lower than the posttest score, 5.80. There was no significant difference between pre- and posttests when subjects sang *Eia Makou*.

Table 1

Results of t-test for all groups (I, II, III) and settings (pre- and posttests) (N = 53)

		Paired Differences					<i>t</i>	<i>df</i>	Sig. (2-tailed)
		<i>M</i>	<i>SD</i>	<i>SE Mean</i>	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretests	-1.38	2.11	0.30	-1.98	-0.78	-4.60	49.00	.00*
	Posttests								
Pair 2	PreEia	-0.20	2.29	0.32	-0.85	0.45	-0.62	49.00	0.54
	PostEia								

* $p < .05$.

In the second, third, and fourth analyses, the research investigated how subjects in each group scored. When looking at Group I's scores, the research found that the 19 subjects had an average difference from pretest to posttest scores of -1.32 (*SD* = 2.38) when subjects sang *Pease Porridge Hot*, indicating a significant difference ($p < .05$) was found between pre- and posttests, $t = -2.40$, $p = .03$ (two-tailed) (See Table 2). The mean score of Group I subjects in the pretest was 4.16, which was significantly lower than the posttest score, 5.47. There was no significant difference between pre- and posttests when subjects sang *Eia Makou*.

Table 2Results of *t*-test for Group I subjects and settings (pre- and posttests) (*n* = 19)

		Paired Differences					<i>t</i>	<i>df</i>	Sig. (2-tailed)
		<i>M</i>	<i>SD</i>	<i>SE Mean</i>	95% Confidence Interval of the Difference				
					Lower	Upper			
Group I	Pre Pease- Post Pease	-1.32	2.38	0.55	-2.46	-0.17	-2.40	18.00	0.03*
Group I	PreEia - PostEia	-0.05	1.87	0.43	-0.95	0.85	-0.12	18.00	0.90

* $p < .05$.

In the third analysis, no significant difference was found between pre- and posttests when 18 subjects in Group II sang *Pole Pole*. Even though the subjects improved in the posttest, the mean score was not significantly higher. In addition, there was no significant difference between pre- and posttests when subjects in Group II sang *Eia Makou*.

In the fourth analysis, a significant difference ($p < .05$) was found between pre- and posttests when subjects in Group III sang *Tideo* (See Table 3). The 16 subjects had an average difference from pretest to posttest scores of -1.44 ($SD = 1.97$) when subjects sang *Tideo*, indicating a significant difference ($p < .05$) was found between pre- and posttests, $t = -2.93$, $p = .01$ (two-tailed). The mean score of Group III subjects in the posttest was 6.00, which was significantly higher than the pretest score, 4.56. There was no significant difference between pre- and posttests when subjects in Group III sang *Eia Makou*.

Table 3*Results of t-test for Group III subjects and settings (pre- and posttests) (n = 16)*

		Paired Differences							
		<i>M</i>	<i>SD</i>	<i>SE Mean</i>	95% Confidence Interval of the Difference		<i>t</i>	<i>df</i>	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pre-Post	-1.44	1.97	0.49	-2.48	-0.39	-2.93	15.00	0.01*
Pair 2	PreEia - PostEia	-0.13	2.90	0.72	-1.67	1.42	-0.17	15.00	0.87

* $p < .05$.

In the final analysis, the scores of same subjects (n = 15) who sang *Eia Makou* a year apart were analyzed. There was improvement in the second year, but there was no significant difference between the scores for the two year spread.