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THE COMPARISON OF TWO RHYTHM SYLLABLE SYSTEMS ON THE

METER RECOGNITION ABILITIES OF SECOND AND THIRD GRADE

STUDENTS

by
Richard D. Beckman II

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree
of
The Graduate School
at
Rowan University
2003

Approved by

Professor

Date Approved _____5/16/03_____

ABSTRACT

Richard D. Beckman II

The Comparison of Two Rhythm Syllable Systems on the Meter Recognition Abilities of

Second and Third Grade Students

2003

Thesis Advisor: Dr. Kristyn L. Kuhlman

Master of Arts: Subject Matter Teaching Music

Graduate Division of Rowan University

The purpose of this study was to investigate the efficacy of rhythm syllable systems in developing students' aural discrimination abilities. The problem was to examine the effect of rhythm syllable systems on students' abilities to aurally identify the meter of rhythm patterns. A secondary problem was to examine the interaction effects of music aptitude and rhythm syllable systems.

The sample for this study included 107 students in second and third grade general music classes. Classes remained intact and were randomly assigned to the control group, the time-based syllable group, and the function-based syllable group.

Subjects were administered the *Intermediate Measures of Music Audiation* prior to the start of the treatment period to identify level of music aptitude and a student questionnaire to identify prior rhythmic activity experience. During the treatment period,

the students learned the same rhythm patterns: instruction differed only in the type of rhythm syllable system used. The time-based treatment group used Kodaly rhythm syllables, the function-based treatment groups used Gordon syllables, and the control group continued to use a neutral syllable.

At the conclusion of the 14 week treatment period, all subjects were administered a *Meter Identification Test* in which they were expected to aurally identify patterns as being in duple or triple meter. An ANOVA revealed no significant differences among groups with regard to treatment and no interaction effects between treatment and level of rhythm aptitude. The researcher concluded that there were no differences in abilities of subjects who received rhythm instruction that utilized the function-based syllable system and those who used a time-based syllable system. Furthermore, subjects who used either syllable system failed to demonstrate greater meter identification abilities than students who used no syllable system as part of rhythm instruction.

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with regard to treatment and no interaction effects between treatment and level of rhythm

aptitude. The researcher concluded that there were no differences in abilities of subjects

who received rhythm instruction that utilized the function-based syllable system and

those who used a time-based syllable system. Furthermore, subjects who used either

syllable system failed to demonstrate greater meter identification abilities than students

who used no syllable system as part of rhythm instruction.

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Lastly, I would like to thank my dog Cooper, who always knew when a walk would help clear my mind and focus my thoughts.

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Introduction and Purpose of the Study

<u>Introduction</u>

The association of a set of rhythm syllables with a specific note value or rhythm

pattern is common pedagogical practice in music education today. This practice is

supported by music educators and music learning theorists who maintain that a rhythm

syllable system is necessary in order to learn rhythm patterns efficiently and effectively

(Bluestine, 2000). According to Gordon (1997), failure to implement a rhythmic syllable

system makes it increasingly difficult for students to discriminate among patterns they

need to learn. He further states that when more and more patterns are introduced and

learned, the patterns "begin to sound alike to students unless they can organize the

patterns by syllable names" (p. 97). Schleuter (1997) concurs, stating that the syllables

become the 'words' for remembering and manipulating the rhythm patterns.

A survey of music education textbooks reveals the diversity of rhythm syllable

systems created specifically to help students learn rhythm. Generally, these systems are

presented to the reader without bias or preference, providing little objective evidence

regarding each systems' efficacy in developing students' rhythmic vocabulary. Without

knowledge of research or current theories and knowledge about music learning, a

teacher's choice of rhythm syllable system is often no more than the result of his or her

familiarity with a certain system. According to Schlueter (1997), most teachers teach the

way they were taught as children and "they seldom examine or question traditional

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methods and techniques of instruction with regard to current theories and knowledge about music learning " (p. 20).

Among the most popular of these systems are the Orff word chant, Kodaly syllables, and Gordon syllables. Generally the syllable systems are associated with the creator or proponent of the system such as Orff or Kodaly. The syllable systems, however, can be more appropriately categorized into the following classifications: (a) eurhythmic words, (b) mnemonic words, (c) numbering systems, (d) time-based syllables and (e) beat-function syllables (Bluestine, 2000). Of these systems, the timed-based syllable system as represented by Kodaly is one of the most commonly utilized systems. This rhythm system is part of The Kodaly Concept which was created by Zoltan Kodaly, a Hungarian composer with an interest in music education. Kodaly adapted a rhythmic syllable system created by Emil Cheve for use in his Kodaly Concept (Mark, 1996).

The Kodaly syllable system meets all of the requirements of a time-based syllable system in that certain syllables are associated with the durational value of notes. Each note value, such as a quarter or eighth note, is assigned a syllable regardless of how the note functions within the context of the rhythm pattern. These syllable assignments remain consistent in duple, triple, and uneven meters. For example, a quarter note is assigned with the syllable *Ta* and a pair of eighth notes are assigned with the syllables *Ti Ti*. In a time signature of 4/4, two quarter notes followed by four eighth notes would be chanted *Ta – Ta – Ti Ti – Ti Ti* (Figure 1). The same sounding pattern written in a time signature of 4/2 as two half notes followed by four quarter notes would be chanted *Ta+a – Ta+a – Ta Ta – Ta Ta* (Figure 2). The rhythm syllables remain consistent regardless of the meter.
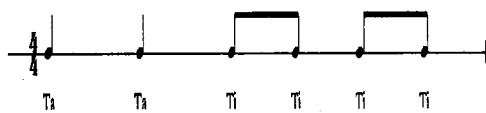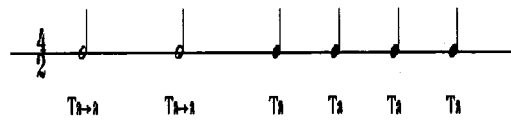
Figure 1   Figure 2

In triple meter with a time signature of 3/4, three quarter notes would be chanted *Ta Ta*

Ta (Figure 3). The same sounding pattern written in a time signature of 3/8 with three

eighth notes would be chanted *Ti Ti Ti* (Figure 4). Although students may not yet have

learned to read rhythm notation, they are learning to associate a specific written note

value with a syllable. Examples of the Kodaly syllable system for the patterns used in

this study are found in Appendix A.
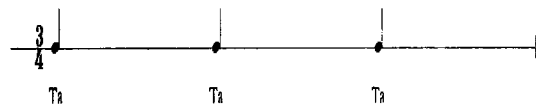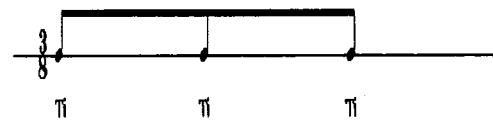

Figure 3   Figure 4

The time-based rhythm syllable system is contrasted by the beat function-based

rhythm syllable system, a syllable system which takes into consideration how the notes

function within a rhythm pattern regardless of value or duration. In a function-based

rhythm syllable system the syllables are associated with the strong and weak beats of the

rhythm pattern. The terms 'macrobeats' and 'microbeats' were coined by Gordon to

describe the strong and weak beats in rhythm patterns. Gordon refers to the strong beat

as the 'macrobeat" and the weak beat as the 'microbeat' (Gordon, 1997). In a function-

based syllable system the macrobeats are labeled with the same syllable, and the

microbeats are labeled according to their function within a rhythm pattern and within a

specific meter. This unique feature makes the function-based system the only syllable

system to meet the criteria set forth by Schleuter (1997) that different but related syllables

should be used for duple, triple, and unusual meters. The differences in syllables among

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meters enables the student to easily discriminate among meters, both by differences in the feel of the meters as well as the syllables associated with meters.

A function-based rhythm syllable system was developed by Gordon and described in his book, *Learning Sequences In Music: Skill, Content, And Patterns* (1997). In Gordon's function-based rhythm syllable system, the macrobeat is always labeled *Du* while the microbeats change dependent on whether the pattern is in duple or triple. In duple meter the microbeats would be labeled *Du De*. For example, in duple with a meter signature of 4/4, two quarter notes followed by four eighth notes would be chanted *Du – Du – Du De – Du De* (Figure 5). The same sounding pattern written in a meter of 4/2 would use the same syllables *Du – Du – Du De – Du De* (Figure 6) because the functions of the beats have not changed although the notation has.
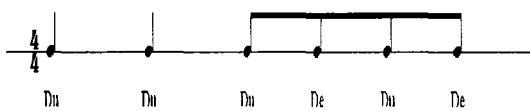

| Figure 5 | Figure 6 |

Adhering to Schleuter's criteria for syllable systems, Gordon's syllables for triple meter differ from the syllables for duple meter. The macrobeat is still labeled *Du* however the remaining microbeats are now labeled *Da* and *Di*. In triple meter with a time signature of 3/4, three quarter notes are chanted *Du Da Di* (Figure 7). The same sounding pattern written in a meter of 3/8 is still chanted *Du Da Di* because the function of the macro and microbeats has not changed (Figure 8). Further examples of the Gordon function-based syllable system for the patterns used in this study are found in Appendix A.
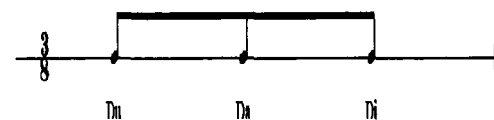

| Figure 7 | Figure 8 |

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Few studies exist which compare the efficacy of time-based and function-based rhythm syllable systems. A five-month study conducted by Palmer (1976) investigated the effectiveness of a time-based syllable and a function-based syllable system on the rhythm reading achievement of fourth grade students. Palmer compared Richard's system, a time-based rhythm solfege system based on Kodaly, with a function-based system using syllables created by Gordon. Although no significant difference in students' rhythmic performances was found between syllable systems ($p > .05$), Palmer reported results favoring the function-based system through analysis of the gain scores.

A similar twelve-week study was conducted by Bacon (1998) who investigated the use of the '1 e + a' mnemonic syllable system and the Gordon function-based rhythm syllable system. Beginning instrumental students were taught the same rhythm patterns in duple and triple meters but differed only in the counting approach. At the end of the treatment period, each student was administered a meter recognition test and performed four rhythm etudes on his or her instrument. Significant differences ($p < .05$) in performance of triple meter were found, the results favoring the students who used the Gordon rhythm syllables and the students in the control group who used no syllable system over the students who used the '1 e + a' syllable system.

Problems

Schleuter states that the purpose of syllable systems is to label the musical sounds, not the notation (1997), yet the studies by Palmer and Bacon focused on the efficacy of a rhythm syllable system on students' rhythm and meter performance through the use of reading notation. These studies did not investigate students' ability to aurally identify the musical sound of meters, and, in fact, there is a lack of information regarding the

effectiveness of rhythm syllable systems in developing aural identification of meters. Therefore, the purpose of this study is to investigate students' aural abilities with regard to rhythm syllable systems. The problem of the study is to examine the effect of rhythm syllable systems on students' abilities to aurally identify meter of rhythm patterns. A secondary problem is to examine the interaction effects of music aptitude and rhythm syllable systems.

Chapter Two

Related Research

The Palmer Study

The purpose of this study was to compare effectiveness of the Richards and Gordon rhythm syllables in developing the rhythm reading abilities of fourth-grade students. The Richards rhythm syllable system is based upon Kodaly's rhythm syllable system in which the time values of notes are labeled with specific syllables. The researcher also compared the Richards and Gordon syllables to using no syllable system.

The subjects for this study consisted of 136 fourth grade students from three elementary schools located in Florida. The researcher formed a Richards group (n = 48), a Gordon group (n = 50) and a control group (n = 38). Each group consisted of two intact general music classes. Students in the control group were from one elementary school: the remaining two schools each had one Richards group and one Gordon group.

Subjects were administered the *Musical Aptitude Profile* (*MAP*) (Gordon, 1995) to determine level of music aptitude. Prior achievement of the subjects' rhythm reading and rhythm performance abilities were measured through a series of four pre-tests. Subsections of Colwell's *Music Achievement Test* (*MAT*), the *MAT II* and Gordon's *Iowa Test of Musical Literacy* (*ITML*) were used to measure rhythm reading achievement. Rhythm performance achievement was measured by Palmer's self-designed test. Subjects' rhythm performances were recorded and evaluated on a five-point rating scale by a panel of three independent judges. Following the pre-testing, treatment was

administered for five months by the researcher. During this time, the Richard's group received instruction using Richard's time-based syllables, the Gordon group received instruction using Gordon's function-based syllables, and the control group received no special instruction. Each group met three times a week for 20 minutes, totaling 60 minutes a week. At the end of the treatment period, the subjects were re-evaluated with the same tests used for pre-testing.

Palmer used an ANCOVA to analyze the differences in the gain scores of the subject's pre and posttests with music aptitude serving as a covariate. Although no significant differences were found at the $p > .05$ level, Palmer stated that the Gordon group had a slight increase of pre-test to post-test gain scores in performance achievement. The researcher concluded that although the Gordon syllable system was statically better in developing subject's rhythm performance achievement then the Kodaly syllables, other factors may have added to the results such as the 'Hawthorne' effect. Palmer also stated that the Kodaly and Gordon rhythm syllables were better then using no syllable system at all.

Comparison between the Palmer study and the present study

The Palmer study examined the effects of the Kodaly and Gordon syllable systems on subjects' rhythm reading performance and achievement. The present study examines the effect of rhythm syllables on subjects' abilities to aurally identify meters. Subjects are not required to read rhythm notation, but rather to associate syllables with the sound of rhythm patterns for the purpose of identifying meter.

Both studies included the use of a music aptitude test to measure subjects' rhythm aptitude prior to the start of the study as well as a researcher-designed performance assessment. Both studies also compare the interactive effects of music aptitude with differences between the Kodaly, Gordon, and control groups.

The Bacon Study

The purpose of this study was to compare the use of the 'le + a' counting system, Gordon rhythm syllables, and no syllable system in student performance achievement on an instrument. The researcher also sought to compare the different counting systems with regard to students' abilities to identify meter.

For this study, subjects consisted of 81 beginning band students who were divided into three groups: the 'le + a' group (n = 25), the Gordon syllable group (n = 32) and the control group (n = 24) which used no counting system. The students' homogenous lesson groups were kept intact when assigned to a treatment group. The subjects for the twelve-week study were from a suburban middle school in central Michigan.

Subjects were administered the *MAP* (Gordon, 1995) prior to the start of the treatment period to insure that level of music aptitude was normally distributed among the groups. Throughout the treatment period, instruction for each group was identical except for use of the counting system. Each group met for two 42-minute classes a week, totaling 24 classes during the treatment period. During each class, the researcher administered five to ten minutes of rhythm instruction in the beginning of the lesson. The remainder of the lesson time was spent on normal beginning instrumental instruction which was taught by the students' regular instrumental instructors. At the end of the treatment period, the

students were subjected to a researcher-designed meter recognition test and a performance test of four rhythm etudes. The rhythm etudes consisted of a duple meter prepared etude, a triple meter prepared etude, a duple meter unprepared etude, and a triple meter unprepared etude. The rhythm etudes were recorded by the researcher and rated by two independent judges using a five-point continuous rating scale.

At the conclusion of the treatment period, the results of the meter recognition test were subjected to a one-way ANOVA. No significant differences were found between treatments for meter recognition. Results for the combined scores of the students' performance on rhythm etudes were also subjected to a one-way ANOVA. No significant differences were found as a result of treatment on the combined performances of etudes. However, an ANOVA was calculated on each individual etude and revealed significant results ($p < .05$) favoring the Gordon syllables and no syllables over the 'le + a' counting system on the triple meter prepared, triple meter unprepared, and combined triple meter etudes.

Bacon concluded that "the results of this study indicate that Gordon or neutral rhythm syllables, when used in an aural/oral presentation teaching style, may be a better teaching system than what is typically used with popular method books." The researcher also suggests that rhythm aptitude may be a more significant factor in student performance than the use of a syllable system.

Comparison between the Bacon study and the present study

The Bacon study compared the effects of the 'le + a' counting system and the Gordon rhythm syllable system on subjects' abilities to discriminate meters and performance

achievement. Similar to the Bacon study, the present study examines the effects of Kodaly and Gordon rhythm syllable systems on the subjects' abilities to aurally discriminate meters. However, the subjects in the Bacon study were administered a meter recognition test which consisted of unfamiliar songs that were performed in duple and triple meter. In the present study, the meter identification test consists of rhythm patterns chanted on a neutral syllable. The subjects in the present study will be expected to apply the syllables they learned during the treatment period to familiar and unfamiliar rhythm patterns.

A one-way ANOVA was used in the Bacon study to compare the treatment with the subjects' post-test score on the meter recognition test. In the present study, a 3 x 3 two-way ANOVA will be used to compare treatment and post-test scores but also examine interaction effects between music aptitude and treatment.

Chapter Three

Design of Study

Sample

The sample for the current study consisted of 107 second and third grade students from general music classes in the Cherry Hill Public Schools located in Southern New Jersey. The subjects included in the study came from diverse ethnic and social backgrounds.

Procedures

The sample included three classes of third grade students and three classes of second grade students, all of whom had been taught general music by the researcher during the school year. For three months prior to the start of the 14-week treatment period, all of the classes were taught the duple and triple rhythm patterns included in this study (Appendix A) on the neutral syllable *bah* in their weekly music class.

Prior to the start of the study, the researcher sent a letter to the following people in the Cherry Hill Public Schools requesting permission to perform the research on the subjects: the principals of Johnson and Sharp Elementary Schools, the district's Supervisor of the Arts, and the Assistant Superintendent of Instruction and Professional Development (Appendix B).

The subjects' general music classes were kept intact and randomly assigned to the control group (n = 36), the time-based treatment group (n = 35), or the function-based

treatment group (n = 36). All classes were administered the *Intermediate Measures of Music Auditation* (Gordon, 1982) to determine the subject's level of rhythmic aptitude. Subjects were designated as having a high, average or low music aptitude based on the norms listed in the test manual. Because differences in students' rhythm performances have been found based on piano experience (Kuhlman, 1996), a researcher-designed questionnaire (Appendix C) was also administered to all subjects for the purpose of obtaining information which may impact subjects' rhythm achievement.

Duple and triple meter rhythm patterns selected for use in the study are from *Jump Right In: the instrumental series* (Grunow, Gordon & Azzara, 2000). According to the authors, these patterns were chosen because they are found in the majority of folk song literature commonly used in general music classes. The patterns were taught to all groups during the first ten minutes of each music class. The remainder of the class was spent on regular music classroom activities mandated by the school music curriculum.

The teaching process of the rhythm pattern was identical for all groups with the exception of the system of rhythm syllable used. The researcher aurally presented a pattern using the neutral syllable *bah* to all groups and students echoed the pattern back. During the echo process, students were randomly selected to provide solo performances. The purpose of the solo performances was to provide a way for the researcher to aurally evaluate the student performance and familiarity of the patterns. After a pattern became familiar to the subjects and they were able to perform it consistently using *bah*, the researcher aurally taught the pattern using rhythm syllables. The time-based treatment group used Kodaly time-based rhythm syllables. The function-based treatment group used Gordon's function-based rhythm syllables. The control group continued to learn the patterns on the neutral syllable *bah* for the remainder of the treatment period. Both duple

and triple rhythm patterns were taught in each class period using a metronome set to 86 beats per minute to provide a steady pulse during the rhythm pattern training. Starting during week four of the treatment process, the researcher occasionally presented a pattern on *bah* and asked the students to perform the pattern with the proper rhythm syllables. In order to prepare students for the testing situation, the researcher periodically chanted a pattern using *bah* and asked students to identify if the pattern was in duple or triple meter.

At the conclusion of the treatment period, the researcher administered a self-designed *Meter Identification Test* (*MIT*, Appendix D). The test consisted of a CD recording of the investigator chanting duple and triple rhythm patterns. A metronome set at 84 beats per minute was used in the recording of the *MIT* to provide a steady pulse during the performance of the patterns. Twenty-four patterns were included in the test: 16 of the patterns were familiar and taught during the study, the remaining eight were unfamiliar. Students were expected to recognize the sound of the patterns and encode the syllables learned during the treatment process to determine if the pattern was in duple or triple meter. The students recorded answers by circling the correct word, 'duple', 'triple' or '?' after listening to each pattern. The "?" was used to discourage the subjects from guessing "duple" or "triple" on the patterns that they could not identify as duple or triple meter with certainty.

Analysis

A 3 x 3 two-way ANOVA was used to investigate differences among the control group, timed based treatment, and function-based treatment group on the subjects' abilities to identify meter (Best & Kahn, 2003). It also identified interaction effects between treatment and levels of rhythm aptitude.

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Chapter Four

Results and Interpretations

The 24-item *Meter Identification Test* yielded the following results as shown in

Table 1. The mean score for the control group was 14.138. The mean score for the

function-based treatment group was 16.111, and the mean score for the time-based

treatment group was 13.628.

Analysis of Variance for Meter Identification Test

Table 1
Mean scores of MIT by treatment group

Treatment	n	Mean	*SD*
Function-based			
High	13	17.153	5.225
Medium	19	15.315	2.849
Low	4	16.500	1.914
Total	36	16.111	3.823
Time-based			
High	2	18.000	2.828
Medium	25	13.480	3.583
Low	8	13.000	3.251
Total	35	13.628	3.565
Control			
High	3	14.000	3.000
Medium	16	13.312	3.419
Low	17	14.941	4.099
Total	36	14.138	3.719

Results from the *Student Questionnaire* revealed that an almost equal number of

subject's with piano experience comprised each group: function-based group (n = 7);

time-based group (n = 8); control group (n = 6). Thus, possible confounding effects due

to piano experience were internally controlled; therefore piano experience was not

considered in further analyses.

A 3 x 3 two–way ANOVA was used to investigate differences among the control

group, timed-based treatment, and function-based treatment group on the subjects'

abilities to identify meter. Results of the analysis of variance revealed no significant

differences among treatment groups at the .05 level of significance (Table 2). Results

also revealed that there was no significant interaction between level of music aptitude and

treatment.

Table 2
3 x 3 Analysis of variance of MIT scores by treatment group and rhythmic aptitude

Source of Variance	df	Sum of Square	Mean	F	p
APTITUDE	2	49.609	24.805	1.818	.168
TREATMENT	2	56.426	28.213	2.067	.132
APTITUDE * TREATMENT	4	39.672	9.918	.727	.576
Error	98	1337.416	13.647		
Total	107	24470.000			

Interpretations

The problem of this study was to examine the effect of different syllable systems on students' meter discrimination abilities, specifically examining the time-based and function-based syllable systems. Results of the study revealed no difference in abilities of subjects who received rhythm instruction that utilized the function-based syllable system and those who used a time-based syllable system. Furthermore, subjects who used either syllable system failed to demonstrate greater meter identification abilities than students who used no syllable system as part of rhythm instruction.

Chapter Five

Summary and Conclusions

Purpose and Problems

The purpose of this study was to investigate the efficacy of rhythm syllable systems in developing students' aural discrimination abilities. The problem was to examine the effect of rhythm syllable systems on students' abilities to aurally identify meter of rhythm patterns. A secondary problem was to examine the interaction effects of music aptitude and rhythm syllable systems.

Design

The sample for this study included 107 students in second and third grade general music classes. Classes remained intact and were randomly assigned to the control group, the time-based syllable group and the function-based syllable group. Each group consisted of one second grade and one third grade class and included at least 35 subjects. All groups received music instruction from the researcher for 30 minutes once a week.

Subjects were administered the *IMMA* prior to the start of the treatment period to identify level of music aptitude and a student questionnaire to identify prior rhythmic activity experience. All students received rhythm pattern training on the neutral syllable *bah* before the treatment period. During the treatment period, the students learned the same rhythm patterns: instruction differed only in the type of rhythm syllable system used. The time-based treatment group used Kodaly rhythm syllables, the function-based

treatment group used Gordon syllables, and the control group continued to use a neutral syllable. A metronome was used in the pattern teaching process to provide a steady pulse for the subjects. The rhythm patterns were taught during the first 10 minutes of each music class, the remainder of the class was used for regular classroom music activities.

At the conclusion of the 14 week treatment period, all subjects were administered the *MIT*. The researcher designed the *MIT* which included both unfamiliar patterns and familiar patterns learned during the treatment process. The subjects were required to circle 'duple', 'triple' or '?' on the *MIT* answer sheet.

After data was compiled from the subjects' test scores, a 3 x 3 two-way ANOVA was used to investigate differences among groups. It also identified interaction effects between treatment and level of subjects' rhythm aptitude.

Results

The ANOVA revealed that there were no significant differences among groups with regard to treatment. The ANOVA also revealed that there were no interaction effects between treatment and level of rhythm aptitude.

Conclusions

Based on data acquired from the present study, it may be concluded that choice of rhythm syllable system has no effect on students' abilities to identify meter. The findings in the present study do not support Bluestine's statement that a syllable system is necessary in order to learn rhythm patterns efficiently and effectively; however, it is

important to note that the 14-week study may not have provided subjects with enough time to use the syllables to their full potential.
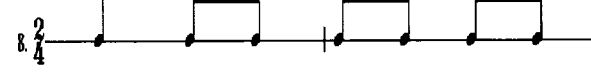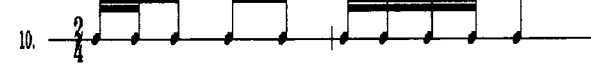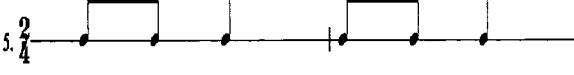
Analysis of the mean scores did reveal that subjects in the function-based treatment group to have scored higher on the *Meter Identification Test* with a mean score of 16.11. Both of the other groups scored lower: the time-based group mean was 13.62 and the control group mean was 14.13. Although not statistically significant, the higher mean scores of the function-based treatment group provides some evidence that use of a function-based rhythm syllable system may contribute to the development of students' abilities to aurally identify meter to a greater extent than a time-based syllable system or no syllable system.

The results of the study may have been affected by the inequity of students with high, medium and low rhythm aptitude in each of the three groups. It was assumed that subjects in this study would represent a normal distribution of rhythm aptitude; however, the function-based group had 13 high, 19 medium and 4 low rhythm aptitude subjects. The time-based group had 2 high, 25 medium and 8 low rhythm aptitude subjects, whereas the control group consisted of 3 high, 16 medium and 17 low aptitude subjects. In the Palmer study, data was subjected to an ANCOVA with rhythm aptitude serving as a covariate. The use of an ANCOVA in the present study might have been useful in controlling the inequity of rhythm aptitude levels which comprised treatment groups.
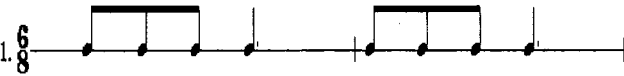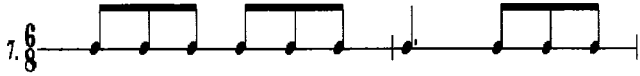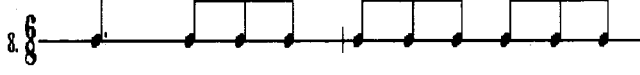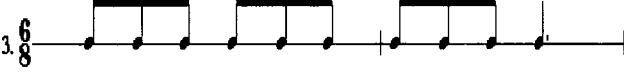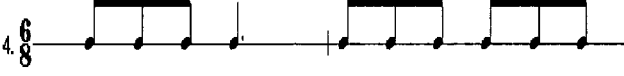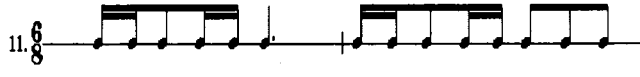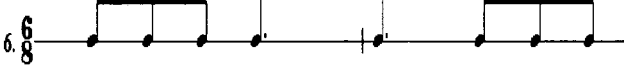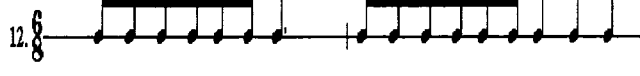
In conclusion, the researcher recommends that future designs of this study include a longer treatment period. The full extent rhythm syllable system training may be apparent if students are given more time to use the syllables in rhythm pattern training than this study allowed.

Appendix A

Duple Patterns

1. $\frac{2}{4}$
Ta   Ti   Ti   Ta   Ta
Du   Du   De   Du   Du

2. $\frac{2}{4}$
Ti   Ti   Ta   Ta   Ti   Ti
Du   De   Du   Du   Du   De

3. $\frac{2}{4}$
Ti   Ti   Ti   Ti   Ti   Ti   Ta
Du   De   Du   De   Du   De   Du

4. $\frac{2}{4}$
Ti   Ti   Ta   Ti   Ti   Ti   Ti
Du   De   Du   Du   De   Du   De

5. $\frac{2}{4}$
Ti   Ti   Ta   Ti   Ti   Ta
Du   De   Du   Du   De   Du

6. $\frac{2}{4}$
Ta   Ti   Ti   Ti   Ti   Ta
Du   Du   De   Du   De   Du

7. $\frac{2}{4}$
Ti   Ti   Ti   Ti   Ta   Ti   Ti
Du   De   Du   De   Du   Du   De

8. $\frac{2}{4}$
Ta   Ti   Ti   Ti   Ti   Ti   Ti
Du   Du   De   Du   De   Du   De

9. $\frac{2}{4}$
Ti   Ka   Ti   Ta   Ti   Ka   Ti   Ti   Ti
Du   Ta   De   Du   Du   Ta   De   Du   De

10. $\frac{2}{4}$
Ti   Ka   Ti   Ti   Ti   Ti   Ka   Ti   Ka   Ta
Du   Ta   De   Du   De   Du   Ta   De   Ta   Du

11. $\frac{2}{4}$
Ti   Ka   Ti   Ka   Ta   Ti   Ka   Ti   Ka   Ti   Ti
Du   Ta   De   Ta   Du   Du   Ta   De   Ta   Du   De

12. $\frac{2}{4}$
Ti   Ti   Ti   Ti   Ka   Ti   Ka   Ti   Ti   Ti
Du   De   Du   De   Ta   Du   Ta   De   Du   De

Triple Patterns

Appendix B

Richard Beckman
Sharp Elementary School
Cherry Hill, NJ 08003
(856) 424-1550
rbeckman@chclc.org

Mrs. Betsy Holschuh
Principal
Johnson Elementary School
Kresson Road
Cherry Hill, NJ 08034

January 6, 2003

Dear Mrs. Holschuh,

I am writing to request permission to conduct the research for my Master's Thesis in your school. Specifically, I would like permission to work with the Second and Third grade classes I presently have in my schedule. The research for the thesis will take place during a sixteen week period starting the week of January 6th and ending the week of April 28th. The research will involve providing instruction with two different types of rhythm solfege both of which are congruent to the Cherry Hill Music Standards. All students in the second and third grade classes will take a written pre-assessment prior to the study and a post-assessment at the end of the study. Instruction for both the control and treatment groups will be the same accept for the rhythm syllables.

If you have any questions, concerns or require further explanation, please do not hesitate to contact me at the above address. I would like to thank you in advance for your consideration to my request.

Sincerely,

Richard Beckman

Richard Beckman
Sharp Elementary School
Cherry Hill, NJ 08003
(856) 424-1550
rbeckman@chclc.org

Mr. Robert Homer
Principal
Sharp Elementary School
Old Orchard Road
Cherry Hill, NJ 08003

January 6, 2003

Dear Mr. Homer,

I am writing to request permission to conduct the research for my Master's Thesis in your school. Specifically, I would like permission to work with the Second grade class I presently have in my schedule. The research for the thesis will take place during a sixteen week period starting the week of January 6th. The research will involve providing instruction with two different types of rhythm solfege both of which are congruent to the Cherry Hill Music Standards. All students in the second grade class will take a written pre-assessment prior to the study and a post-assessment at the end of the study. Instruction for both the control and treatment groups will be the same accept for the rhythm syllables.

If you have any questions, concerns or require further explanation, please do not hesitate to contact me at the above address. I would like to thank you in advance for your consideration to my request.

Sincerely,

Richard Beckman

Richard Beckman
Sharp Elementary School
Cherry Hill, NJ 08003
(856) 424-1550
rbeckman@chclc.org

Mr. Joseph Akinskas
Assistant Principal & Supervisor of the Arts
Cherry Hill High School West
2101 Chapel Avenue
Cherry Hill, New Jersey 08034

January 6, 2003

Dear Mr. Akinskas,

I am writing to request permission to conduct the research for my Master's Thesis in Johnson and Sharp Elementary schools. I am currently a music teacher in both buildings and will be the only one participating in the administration of the research study. Specifically, I would like permission to work with the Second and Third grade classes I presently have in my schedule. The research for the thesis will take place during a sixteen-week period starting in the spring semester of 2003. The research will involve providing instruction with two different types of rhythm solfege, both of which are congruent to the Cherry Hill and State Standards for music. All students involved will take a written pre-assessment prior to the study and a post-assessment at the end of the study. Instruction for both the control and treatment groups will be the same except for the use of different rhythm syllables.

If you have any questions, concerns or require further explanation, please do not hesitate to contact me at the above address. I would like to thank you in advance for your consideration of my request.

Sincerely,

Richard Beckman

Richard Beckman
Sharp Elementary School
Cherry Hill, NJ 08003
(856) 424-1550
rbeckman@chclc.org

Ms. Tammy Murphy
Assistant Superintendent Instruction and Professional Development
Cherry Hill Public Schools
45 Ranoldo Terrace
Cherry Hill, New Jersey 08034

January 6, 2003

Dear Ms. Murphy,

I am writing to request permission to conduct the research for my Master's Thesis in Johnson and Sharp Elementary schools. I am currently a music teacher in both buildings and will be the only one participating in the administration of the research study. Specifically, I would like permission to work with the Second and Third grade classes I presently have in my schedule. The research for the thesis will take place during a sixteen-week period starting in the spring semester of 2003. The research will involve providing instruction with two different types of rhythm solfege, both of which are congruent to the Cherry Hill and State Standards for music. All students involved will take a written pre-assessment prior to the study and a post-assessment at the end of the study. Instruction for both the control and treatment groups will be the same except for the use of different rhythm syllables.

If you have any questions, concerns or require further explanation, please do not hesitate to contact me at the above address. I would like to thank you in advance for your consideration of my request.

Sincerely,

Richard Beckman

Appendix C

Student Questionnaire

Please read each question and statement carefully.
Circle YES or NO to indicate if the statement does or does not describe you.

Name _____   Age_____

Teacher_____   Grade_____

1. I have taken piano lessons for at least one year.   YES   NO

2. I am taking piano lessons this year.   YES   NO

3. I have played a musical instrument for at least one year.   YES   NO
    (not including the recorder)

4. I am playing an instrument this year.   YES   NO
    (not including the recorder)

5. I have taken dance lessons for at least one year.   YES   NO

6. I am taking dance lessons this year.   YES   NO

Appendix D

Meter Identification Test

Name:_____   Teacher:_____   Date:_____

Practice Question 1
    METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

Practice Question 2
    METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

1. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

2. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

3. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

4. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

5. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

6. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

7. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

8. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

9. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

10. METER IN 2   METER IN 3   ?
    (Duple)   (Triple)

|		
11. METER IN 2 (Duple)	METER IN 3 (Triple)	?
12. METER IN 2 (Duple)	METER IN 3 (Triple)	?
13. METER IN 2 (Duple)	METER IN 3 (Triple)	?
14. METER IN 2 (Duple)	METER IN 3 (Triple)	?
15. METER IN 2 (Duple)	METER IN 3 (Triple)	?
16. METER IN 2 (Duple)	METER IN 3 (Triple)	?
17. METER IN 2 (Duple)	METER IN 3 (Triple)	?
18. METER IN 2 (Duple)	METER IN 3 (Triple)	?
19. METER IN 2 (Duple)	METER IN 3 (Triple)	?
20. METER IN 2 (Duple)	METER IN 3 (Triple)	?
21. METER IN 2 (Duple)	METER IN 3 (Triple)	?
22. METER IN 2 (Duple)	METER IN 3 (Triple)	?
23. METER IN 2 (Duple)	METER IN 3 (Triple)	?
24. METER IN 2 (Duple)	METER IN 3 (Triple)	?

Patterns included in the *Meter Identification Test*
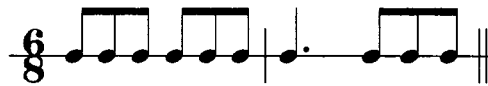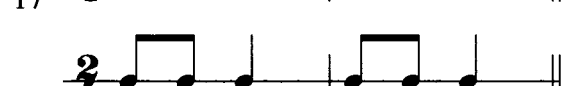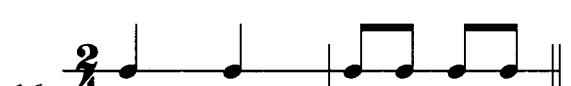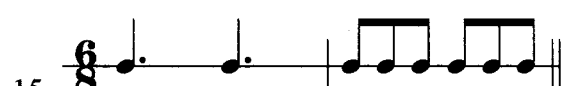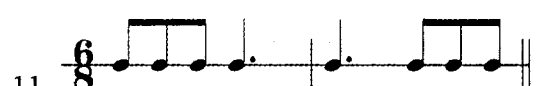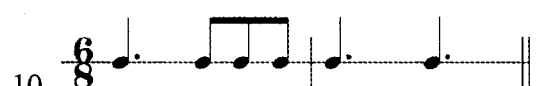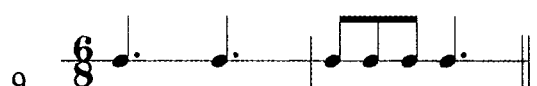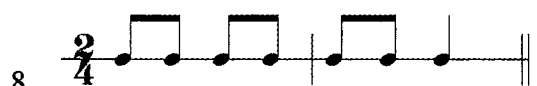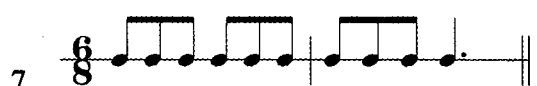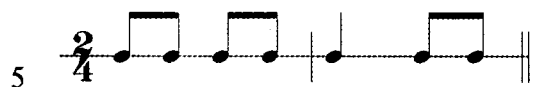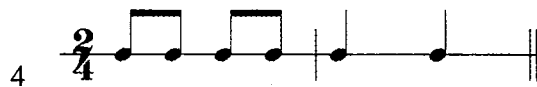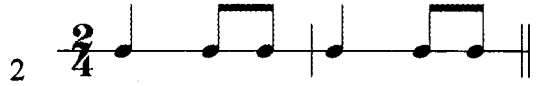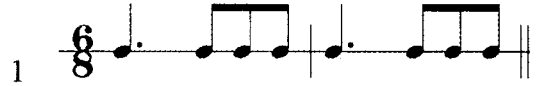
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