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#### ABSTRACT

LOUNDERMON, CORRELL DEMETER. The Use of Music or Percussion Instruments in the Teaching of Ninth Grade Modern Jazz Dance. (1976)  
Co-Directed by: Dr. Pearl Berlin and Dr. Lois Andreasen. Pp. 65

The study was concerned with the nature and effectiveness of the rhythmic accompaniment in teaching Beginning Modern Jazz Dance. The experiment sought to identify and describe differences between pre and post instructional performance of selected classes. Answers were sought to the following questions: (a) How do students compare in their pre and post instructional performance considering their learning featured percussion instruments or unfamiliar music or familiar music for accompaniment? (b) Are differences in pre and post instructional performance merely attributable to chance or may they be associated with the type of accompaniment experienced? (c) How are (1) grace (2) co-ordination and balance (3) composition evaluated by judges before and after instruction?

The subjects were sixty-three (63) ninth grade girls at O. Trent Bonner Junior High School, Danville, Virginia, organized in three groups according to physical education classes. Constants in the experiment were: warm-ups, presentation of new fundamental, review of previous fundamentals, group work on the dance. The accompaniment was the experimental variable applied during ten (10) instructional classes. Also, the teacher was the same for all three groups. Pre-instructional and post-instructional performance were recorded on video-tape and judged by three dance authorities who rated subjects numerically on a five point scale using pre-determined criteria. Judges ratings were ranked, summated and/or averaged

to permit applications of the Wilcoxon Matched-Pairs Sign-Ranks Test and the Kruskal-Wallis One-Way Analysis of Variance by Ranks Test. A descriptive comparison of judges evaluations of pre and post instructional performance was considered from the raw scores in the specific criteria.

On the basis of data analysis it was concluded that (a) students post instructional performance was markedly superior for all groups. The Wilcoxon Matched-Pairs Sign-Ranks Test yielded T values which were significant at .01 for each group; (b) when the Kruskal-Wallis One-Way Analysis of Variance by Ranks Test is rigidly interpreted, the data suggest that groups exhibited sameness in their performance. Differences that might have been associated with accompaniment were established at the .10 probability level; (c) Group I which experienced the Percussion Accompaniment was assigned the lowest post instructional performance rating difference in each of the three criteria grace, coordination and balance, and composition. Group III, subjects whose instruction was accompanied by Familiar Music earned the highest post instructional performance rating differences in composition and coordination and balance. However, they had a slightly lower rating difference in grace than Group II, the Unfamiliar Music Accompaniment Group.

21

THE USE OF MUSIC OR PERCUSSION INSTRUMENTS IN THE  
TEACHING OF NINTH GRADE MODERN JAZZ

DANCE

by

Correll Demeter Lounderman

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## TABLE OF CONTENTS

	Page
APPROVAL PAGE . . . . .	ii
ACKNOWLEDGEMENTS . . . . .	iii
LIST OF TABLES . . . . .	vi
CHAPTER	
I. INTRODUCTION . . . . .	1
Statement of the Problem . . . . .	3
Definition of Terms. . . . .	3
Assumptions Underlying The Research . . . . .	4
Scope of the Study . . . . .	5
Significance of the Study . . . . .	5
II. REVIEW OF RELATED MATERIALS . . . . .	6
General Information About Danville, Virginia . . . . .	6
The O. Trent Bonner School . . . . .	7
Explanation of Music With Respect to Creative Dance . . . . .	8
Electronic Music For Modern Jazz Dance . . . . .	10
Lesson Planning and Teaching Techniques . . . . .	11
III. PROCEDURES . . . . .	16
Selection of Subjects . . . . .	16
Administration of Experimental Variables . . . . .	16
Unit Outline: Group I - Percussion Accompaniment . . . . .	18
Unit Outline: Group II - Unfamiliar Music . . . . .	19
Unit Outline: Group III - Familiar Music . . . . .	20
Selection and Function of Judges . . . . .	21
Video-Taping Procedure . . . . .	23
Analytic Procedures . . . . .	23
IV. DATA AND ANALYSIS . . . . .	25
Data . . . . .	25
Analysis . . . . .	44
Description of Selected Criteria . . . . .	52



## CHAPTER

Page

V.	SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS . . . . .	54
	Summary . . . . .	54
	Conclusions . . . . .	55
1.1	Recommendations . . . . .	56
	Bibliography . . . . .	58
	Appendix A . . . . .	60
1.2	Appendix B . . . . .	65
	Group I - Percussion Accompaniment . . . . .	67
1.1	Pre-Instructional Performance Ratings	
	Group I - Percussion Accompaniment . . . . .	68
1.2	Pre-Instructional Performance Ratings	
	Group II - Unfamiliar Music . . . . .	69
1.3	Pre-Instructional Performance Ratings	
	Group II - Unfamiliar Music . . . . .	68
1.4	Pre-Instructional Performance Ratings	
	Group II - Unfamiliar Music . . . . .	71
1.5	Pre-Instructional Performance Ratings	
	Group III - Familiar Music . . . . .	72
1.6	Pre-Instructional Performance Ratings	
	Group III - Familiar Music . . . . .	74
1.7	Post-Instructional Performance Ratings	
	Group I - Percussion Accompaniment . . . . .	75
1.8	Post-Instructional Performance Ratings	
	Group I - Percussion Accompaniment . . . . .	76
1.9	Post-Instructional Performance Ratings	
	Group I - Percussion Accompaniment . . . . .	77
1.10	Post-Instructional Performance Ratings	
	Group II - Unfamiliar Music . . . . .	78
1.11	Post-Instructional Performance Ratings	
	Group II - Unfamiliar Music . . . . .	79
1.12	Post-Instructional Performance Ratings	
	Group II - Unfamiliar Music . . . . .	80



## LIST OF TABLES

TABLE		Page
1.1	Pre-Instructional Performance Ratings Group I - Percussion Accompaniment . . . . .	26
1.2	Pre-Instructional Performance Ratings Group I - Percussion Accompaniment . . . . .	27
1.3	Pre-Instructional Performance Ratings Group I - Percussion Accompaniment . . . . .	28
2.1	Pre-Instructional Performance Ratings Group II - Unfamiliar Music . . . . .	29
2.2	Pre-Instructional Performance Ratings Group II - Unfamiliar Music . . . . .	30
2.3	Pre-Instructional Performance Ratings Group II - Unfamiliar Music . . . . .	31
3.1	Pre-Instructional Performance Ratings Group III - Familiar Music . . . . .	32
3.2	Pre-Instructional Performance Ratings Group III - Familiar Music . . . . .	33
3.3	Pre-Instructional Performance Ratings Group III - Familiar Music . . . . .	34
4.1	Post-Instructional Performance Ratings Group I - Percussion Accompaniment . . . . .	35
4.2	Post-Instructional Performance Ratings Group I - Percussion Accompaniment . . . . .	36
4.3	Post-Instructional Performance Ratings Group I - Percussion Accompaniment . . . . .	37
5.1	Post-Instructional Performance Ratings Group II - Unfamiliar Music . . . . .	38
5.2	Post-Instructional Performance Ratings Group II - Unfamiliar Music . . . . .	39
5.3	Post-Instructional Performance Ratings Group II - Unfamiliar Music . . . . .	40

TABLE	Page
6.1 Post-Instructional Performance Ratings Group III - Familiar Music . . . . .	41
6.2 Post-Instructional Performance Ratings Group III - Familiar Music . . . . .	42
6.3 Post-Instructional Performance Ratings Group III - Familiar Music . . . . .	43
7.1 Mean Differences, Ranks, and Rank Sign Differences of Pre-Instructional and Post-Instructional Means for All Judges from Composite Performance Group I - Percussion Accompaniment . . . . .	46
7.2 Mean Differences, Ranks, and Rank-Sign Differences of Pre-Instructional and Post-Instructional Means for All Judges from Composite Performance Group II - Unfamiliar Music . . . . .	47
7.3 Mean Differences, Ranks, and Rank-Sign Differences of Pre-Instructional and Post-Instructional Means for All Judges from Composite Performance Group III - Familiar Music . . . . .	48
8.1 Summation Differences and Ranks of Pre-Instructional and Post-Instructional Ratings for All Judges from Composite Performance - Group I - Percussion Accompaniment..... . . . .	49
8.2 Summation Differences and Ranks of Pre-Instructional and Post-Instructional Ratings for All Judges from Composite Performance - Group II - Unfamiliar Music . . . . .	50
8.3 Summation Differences and Ranks of Pre-Instructional and Post-Instructional Ratings for All Judges from Composite Performance - Group III - Familiar Music . . . . .	51
9 Means of Obtained Ratings From Each Judge for Each Individual According to Selected Criteria and Group . . . . .	53

CHAPTER I  
INTRODUCTION

Dancing is as old as human society. It is associated with the desire to express oneself and to communicate feelings, ideas, emotions, spiritual desires, moods or situations. By dancing, people use the most immediate instrument at their disposal -- the body.

Throughout history, dance has taken many forms and undergone many transitions. Cayou (1971) tells us that Modern Jazz Dance had its beginning in Africa. It reached the West Indies, the South and Central Americas, and the United States, in the form of African Dance, when Africans were taken by force from their homeland as slaves. Slavery in the United States was one of the worst known forms of oppression in history. All aspects of African life were ridiculed or destroyed during that period except dance and music. These activities were maintained informally in many settings. Slavemasters tried to eliminate such cultural expressions in slaves by prohibiting the playing of drums, and any gatherings in large groups up until 1812. Such prohibition, however, did not destroy African dance and music completely. Anthropologist Pearl Primus recalls in 1944, hearing the voice of the drum -- not in any instrument, but in the throat of the Southern Baptist Preachers (Cayou, 1971). She also found the dynamic sweep of movement through space in motions of ministers and congregations alike.

When the drums were prohibited, slaves found replacements i.e., bone clappers, banjos, and hands and feet. In places like Congo Square

where slaves congregated, just outside New Orleans, and also in churches, the tradition of dance was revived and carried on with the same basic African characteristics: (a) bent knee, with the body close to the earth; (b) tendency toward use of the whole foot and immediate transfer of weight; (c) isolation of body parts in movement; (d) rhythmically complex and syncopated movement; (e) carrying as many as two or three rhythms in the body at once -- polyrhythm; (f) music and dance combined as a single expression; (g) individualism of style within a group style; (h) functionalism becoming what is danced -- the art of real life (Cayou, 1971).

The term "Jazz Dance" probably appeared during the 1920s, the "Jazz Age," a time when black dance became more popular on stage and was influenced by the taste of white audiences. Jazz Dance, modern or otherwise, related to the total expression of the dancers as a group and their experiences. The dance does not exist without its music. To consider the implication of music which places the greatest importance on the expressiveness of the persons playing it, is to begin to realize the vivid differences between the tradition of Jazz Dance and the tradition of European Music and Movement.

In Modern Jazz Dance classes today, instructors concern themselves with encouraging students to concentrate on their own bodies as a part of the technique, rather than to focus solely on technique. This stress on individual capabilities and on movement through positions is probably more important in jazz dance than in other forms of dance. Students of jazz dance strive for technical facility only as a means of their own expression.

The author's desire that some of the characteristics of jazz dance described above be developed to some extent in her students, suggested research into the teaching of Modern Jazz Dance. Particular concern with the musical accompaniment that might best contribute to the teaching and learning process was the focus of the study.

#### Statement of the Problem

This study is concerned with the rhythmic accompaniment in the teaching of ninth grade Beginning Modern Jazz Dance. It seeks to identify and describe differences between pre and post instructional performances that may be attributed to the use of: (a) percussion instruments (b) unfamiliar music (c) familiar music during instruction. More specifically, the research seeks to answer the following questions: (1) How do students compare in their pre and post instructional performance considering that their learning featured percussion instruments, or unfamiliar music, or familiar music for accompaniment? (2) Are differences in pre and post instructional performance merely attributable to chance or may they be associated with the type of accompaniment utilized? (3) How are (a) grace (b) co-ordination and balance and (c) composition evaluated by judges before and after instruction?

#### Definition of Terms

For interpretation in this study of Modern Jazz Dance, explanations of the following terms are offered:

Familiar Music Musical selections with rhythmic qualities and structures generally known to students, e.g. "Theme From S W A T;" "Shaft Strikes Again;" "Hot Dog;" "Baby What You Want Me To Do."



Modern Jazz Dance. An introductory instructional unit in junior high school physical education which teaches the basic modern jazz fundamentals of locomotor movement (walks, runs, jumps, leaps), turns, and extensions. Balance and smooth movement from step to step will also be emphasized. The unit culminates with one dance choreographed by the teacher, using combinations of materials learned during the teaching period.

Percussion Instruments. A drum, rhythm sticks, tambourines, and cymbals used to keep rhythm during instruction. Referred to as that dimension of accompaniment that is without music.

Unfamiliar Music. Musical selections with rhythmic qualities and structures of an experimental nature; generally unknown to students. Electronic Music, which consist of electronically generated sounds and natural sounds modified electronically and assembled into a musical composition by magnetic tape manipulations or performed live was selected for use.

#### Assumptions Underlying The Research

Three assumptions underlie this research. First, the judgment of performance by selected experts is accepted as a valid representation. Secondly, the video-tape method of recording and reviewing class procedures is representative of real performance and actual classroom situations. Third, the study acknowledges a sameness with respect to teacher, sequence of experiences, and homogeneity of students, that have a stabilizing effect in the teaching-learning sequence. That is to say, these considerations are not variable in the study. Therefore, differences between pre and post performances may be attributable to the experimental variable type of accompaniment.

### Scope of the Study

Sixty-three (63) students from three girl's physical education classes, ninth grade, at O. Trent Bonner Junior High School, Danville, Virginia, were subjects. The inquiry was further delimited by the time span in which it was pursued as well as by the specified instruments used in the manipulation of variables and the video-tape recording of performance.

### Significance of the Study

The author, as a teacher, faces the daily challenge of keeping junior high school students motivated and interested in physical education subject matter. The challenge is quite evident when new material, such as Modern Jazz Dance, is introduced.

It is hoped that this study will emphasized the importance of using music, familiar and unfamiliar, as tools for teaching Modern Jazz Dance. The author further hopes this research will provide still another approach to better physical education instruction while helping students to move with comfort to music. Also, the involvement of university personnel in the evaluation of junior high school dance performance has the potential of bringing reality to the knowledge of prospective dance teachers.



## CHAPTER II

## REVIEW OF RELATED MATERIALS

Following identification of the problem, materials were studied which helped focus the study. The following chapter describes the environment in which the research was conducted and also presents ideas about teaching dance which were considered by the writer in carrying out instruction.

General Information About Danville, Virginia

Background. Danville is an independent city in Pittsylvania County, the largest county in Virginia, and has a population of 46,391 according to the 1970 United States Census. It is located on the Dan River in Southern Virginia in the heart of the famous Piedmont section, and only about 0.3 miles from the North Carolina border. The incorporated city covers an area of 17.1 square miles and is governed by a Manager-Council.

Industry. The chief industry of the city is Dan River Incorporated which employs some 8,500 people locally, and whose net sales are more than \$439 million. The seven largest tobacco processing plants employ over 3,300 persons. Disston Incorporated started production of saws and other hand tools in 1959, and is expanding. Over sixty industries provide a wide variety of goods, Corning Glass Works opened a plant in 1963, producing technical glasses for science and industry. Commodore Corporation Incorporated began production in July, 1965, and has expanded their operations. United Gypsum Company began operation the latter part of 1967, in the production of Duron smooth-two side hardboard and asphalt

coated and impregnated sheathing. Goodyear Tire and Rubber Company began operations in their new plant in late 1966, for the production of tires, and completed an expansion of the plant in June, 1969.

Education. The educational needs of the population are serviced by nine (9) elementary schools, four (4) middle schools, two (2) junior high schools, one (1) senior high school, one (1) community college, one (1) senior college, one (1) parochial school, and two (2) private schools. There is a vocational school that functions as a part of the senior high school and is funded by the public school system. The community school programs are housed in the two (2) junior high schools during the evenings and afternoons. They provide a wide variety of classes for adults and students according to community interest. Such things as pottery, sewing, typing, candle making, slimnastics for women, guitar and others are offered. These programs are sponsored jointly by the public school system and the city recreation department.

#### The O. Trent Bonner School

Site. O. Trent Bonner Junior High School, Danville, Virginia, was formally dedicated December 5, 1971, after completion of the gymnasium and auditorium. The Bonner building is situated on a 47 acre site and occupies 165,000 square feet. It reflects the most modern concept of early secondary education with five instructional wings projecting from the multimedia center, the library. The instructional program is designed to provide all students with appropriate levels of instruction in the communication and computation skills. The curriculum in addition, serves to introduce a variety of exploratory and pre-vocational experiences, and offers students an opportunity to participate in a wide variety of activities

for social growth. At present, Bonner has an enrollment of 849 students; 63 teaching stations; one principal and two assistant principals.

Subject Classes. Students attending O. Trent Bonner Junior High School are scheduled for Health and Physical Education for each of the two years in attendance. Classes for boys and girls are taught separately in alternating five day blocks for both subject areas. When the boys are participating in Health, the girls have Physical Education activities.

Student Background. Students entering Bonner Junior High School in the eighth grade have been exposed to an organized form of physical education from Kindergarden. The curriculum in elementary and middle school is sports and game oriented, with emphasis placed on skills and leadup games for basketball, softball, volleyball and other team sports. Students are also exposed in limited amounts to simple rhythms and square dance. All activities are taught by certified physical education instructors in gymnasium and outdoor settings.

#### Explanation of Music With Respect to Creative Dance

Role of Music in Dance. The body as an instrument of expression must have a stimulus to generate the movement through which expression is achieved. Turner (1958) and LaMeri (1965) suggest music, words, and rhythmic objects as stimuli for dance. LaMeri, further explains that composing movement on pure rhythm is the easiest form of musical interpretation. When working with the rhythm, or basic music beat, one may move directly on the pulsation; double or triple this pulsation; or work in counter-time to the beat. The harmonic or underlying melodic line may also be used in creative movement and is most effective in group choreography. Many sources of music are useful in Jazz Dance classes; clapping

hands, drums, live musicians and recordings can be helpful. The most important consideration in selecting and using music is the class as a whole, and the teacher should think of music as a part of the over-all class experience (Cayou, 1971).

Planning The Use of Music For Dance. Cayou (1971) believes recorded music is worthwhile in early parts of Jazz dance classes when entire movements can be completed without interruptions to change the music. She (Cayou) states that variety in music is desirable; it helps create and maintain student interest and recorded music offers variety.

Criteria For Music Selection. Lippincott (1956) suggests that using the music of ones own era is wise, because of a rhythmic drive and vitality in modern music that matches that of modern dance. One can not, however, be specific about what music is most suitable for dance.

Cues for Teachers. Cayou (1971), offers valuable information to the teacher of modern jazz dance for selecting music. She points out that the teacher already familiar with jazz music should be concerned with staying abreast of currently popular records. The best way to accomplish this is to listen to radio stations that play black music likely to be popular with the students. Another source of record information is charts of best-selling singles and albums found in most newspapers, and several show business magazines. Some show national popularity; others give local or regional preferences. The teacher unfamiliar with jazz music may begin with recommended albums and recording artists. It is further suggested that the individual (1) listen to radio stations that play black music, (2) take time to look at albums in record stores, (3) also review listings in record catalogs. However, classifications

of jazz music or dance may lead to erroneous conclusions. Black music classified by record stores as blues, folk, gospel, rhythm and blues, jazz and some popular music all have the same general characteristics and sources. The divisions into categories is superficial and the teacher should not hesitate to use the music from any category when it is suitable to jazz dance. Russell (1958) states that music tends to provide background and helps set the mood for modern jazz dance, as well as dance in general, and should be chosen with this in mind. The music selected should be listened to many times to capture the mood, changing moods, motives and phrasing. The teacher should memorize the music or become familiar with music before teaching sessions begin, and all music should be taped to avoid frequent record changes during class.

#### Electronic Music for Modern Jazz Dance

Background. Electronic music involves a great deal of manipulative as well as creative activity. It provides a significant part of today's music, possesses a high degree of motivational potential suitable for use with junior high school groups, and is often characterized by an abundance of creative and physical energy (Williman, 1974).

History. The quest to broaden sound materials began as early as 1910 among Italian Musicians. In 1937, John Cage announced that "the use of noise to make music would continue to increase until it reached a music produced through the aid of electrical instruments, that would make all sounds that can be heard available for musical purposes," pg. intro. xix-xx.

Musique Concrete. The Musique Concrete, founded in Paris was the first school of taped music. This occurred after the tape recorder was



developed in Germany during the 1940s. The school used the method of working with pre-recorded sounds and experimented in the production of sounds by electronic means rather than reproduction. Electronic equipment was designed that would activate loudspeakers or magnetize a tape to produce virtually any sound. A basic acoustical theorem that any tone consist of a combination of simpler partial tones called "sine" or "sinusoidal" was utilized. These partial tones can be produced on a loudspeaker or tape by ordinary alternating electronic current. Thus the creativity of the programmer-composer is critical in the final sound produced. During the mid-fifties, magnetic tape became widely available and electronic music truly came into its own. The electronic age in America began formally at a concert led by Leopold Stokowski, on October 28, 1952, at the New York Museum of Modern Art (Russcol, 1972).

Character of Electronic Music. Judd (1961) and Schwartz (1973) offer the idea that electronic music departs from traditional music when traditional musical instruments are synthesized. A work composed by electronic methods has an entirely new concept of "music" and is characterized by new sounds and acoustic effects. It is this element of electronic music today that makes it quite unique, and gives it qualities that make it especially appealing for use in modern jazz dance.

#### Lesson Planning and Teaching Techniques

Group Dance Usage. Well planned lessons are essential to the success of modern jazz dance classes. The use of group dance is the most sensible approach to modern jazz dance in a junior high school setting. It provides a means for the entire class to participate as a group working toward a common goal, the interpretation and reproduction of modern jazz

movements being taught, while at the same time developing their individual skills performance. According to Russell (1958), group dance using music as a starting point opens up fresh fields of composition, rhythm and moods when music is well chosen and sincerely used. Participation in group dance Russell believes helps fulfill the desire to join together to share common experiences. It also aids in the full and balanced development of the individual by enhancing initiative, ones concern for others and an ability to co-operate as the individual learns to know the inner self better, yet is able to recognize the personality of others. Group dance usage is an asset to teaching junior high school students also because it provides little time for students to be inactive during the class period, thus reducing the possibility of disinterest and boredom occurring.

Isolation. Cayou (1971), defines isolation in jazz dance as meaning the separate movement of one body part while the rest of the body remains still, or moves in some other way. The body part isolated usually provides the main movement or the only movement at that time. Isolation of body parts is a skill which must be taught to effectively perform modern jazz movement. Junior high school students find isolation difficult and quite awkward to perform in the beginning. Before this time these students have concentrated their efforts on co-ordinated movement of the body, all body parts working together, for sports purposes. This new introduction - modern jazz dance, which requires that students move in a different way with emphasis placed on one body part as the main focus of movement, must be learned and practiced to become a natural occurrence to students.



Improvisation. Improvisation is another dance skill that is acquired with training. Cayou (1971) feels improvisation should not be used in the beginning stages of jazz dance. The reason proposed for this is that jazz dance requires the ability to move with particular qualities, along particular stylistic lines, with special rhythmic emphasis. Beginning experiences with jazz dance should help students learn to keep time and work in specific ways. Improvisation that is demanded too early does not provide this quality. This is a point all teachers of jazz dance should keep in mind when planning lessons for beginning students.

Lesson Planning. Turner (1957), Hayes (1964), and Penrod (1970) offer valuable suggestions for planning and teaching lessons. They emphasize the importance of warmups, which psychologically prepare students to start moving, increase their circulation and respiration, and stimulate sluggish muscles. Turner, outlines in detail an exercise program and release activities which include variations of all fundamental locomotor skills. Examples of the program include: (1) leg swings - starting position: standing on left leg with right leg extended backward and arms extended sideways. exercise: swing right leg straight forward from the hip, keeping knee straight ahead and brushing floor with foot as leg passes through; reverse the movement swinging right leg backward through the same path; keep body stretched upward, the standing leg straight, and avoid any compensatory body movement. (2) walk - starting position: stand in bent knee position with weight inclined forward. exercise: walk forward, eliminating any vertical motion. Maintain bent-knee position and actively grasp the floor with feet; weight should be taken on the ball of the feet first, then

transferred to heel and through bending knees, walk in slow motion.

variation: run in same position, emphasize the back-leg push and transfer of weight to forward leg. Other walking variations: walk forward and take a quick change in direction each time two (2) accents appear in succession. (music or drum); step forward on left foot, swing right leg forward while raising to a suspension, and drop into a lunge position on right leg. (3-4 counts).

Teacher Demonstration: Penrod (1970) stresses the use of teacher demonstration of movement patterns before students attempt them. This technique helps pupils develop as "artistic eye" to see all the nuances of movement and then reproduce them as demonstrated. The reasons being: (1) Correct execution of exercise is imperative if injuries are to be avoided and physical control is to be established. (2) Mastery of the body is part of the satisfaction that comes from dancing. (3) Those who want to be professional dancers must learn movement patterns quickly and correctly.

Character Study. McCaffrey's (1966) outline suggested activities for character study and motivating the imagination in early movement classes. Students were asked to create a character or object, then using movement they create different moods maintaining the original character figure. Examples: character: a fat woman; Moods: a happy fat woman; a sad fat woman; a tired fat woman; a frightened fat woman. To further extend movement walks, runs and other locomotor movements may be adapted to the character and moods -- a frightened fat woman running from a mugger, or a tired fat woman walking. When objects are used such as trees, moods may include interpretation of natural occurrences. Example:

character: a tree; Moods: a tree blowing in a gentle wind; tree caught in a hurricane; tree hit by a tornado. Using character study enables the teacher to exercise the imagination creating new and exciting characters and moods. It also aids students in using their imaginations and in moving comfortably in a structured atmosphere. The sources of information for planning and teaching dance lessons are numerous. They provide a storehouse of references for the teacher that enable him or her to produce the best results from the students being taught.

Selection of Subjects. The subjects covering an entire year in which the children were sixth grade girls. They completed three regularly scheduled physical education classes at the U. S. Naval Junior High School which were taught by the investigator. These particular classes were chosen because of their frequency and also because of the time they were scheduled, the first three periods of the regular school day.

Assignment of Experimental Variables. The assignment of experimental variables was done by class. Each class was assigned approximately a day and three weeks designated with variables would be substituted. The first class period identified the group to be taught with particular assignments. The second class identified the individual work group. The remaining class was designated the teacher work group.

#### Measurement of Experimental Variables

Class Working. During the conduct of the research, classes were held during the regularly scheduled physical education periods. The following was used as the class later identified themselves the same individuals which would have been assigned in the previous and other physical periods.

## CHAPTER III

## PROCEDURES

The first step undertaken in carrying out this study was the specification of the problem. This was completed concurrent to the reviewing of related materials. Thereafter, the following design and execution processes were pursued.

Selection of Subjects. The students serving as subjects in this experiment were ninth grade girls. They comprise three regularly scheduled physical education classes at the O. Trent Bonner Junior High School which are taught by the investigator. These particular classes were chosen because of their homogeneity and also because of the time they were scheduled, the first three periods of the regular school day.

Assignment of Experimental Variables. The assignment of experimental variables was done by class. Each class was assigned arbitrarily; a slip was drawn which designated which variable would be administered. The first slip picked identified the group to be taught with percussion instruments. The second slip determined the unfamiliar music group; the remaining class was designated the familiar music group.

Administration of Experimental Variables

Class Scheduling. During the conduct of the research, classes were held during the regularly scheduled physical education periods. The auditorium was used as the class site; this location eliminated the noise interference which would have been encountered in the gymnasium with other classes present.

Duration of the Experiment. The study was conducted over a span of ten physical education classes of forty-five (45) minutes actual participation time. The research period was interrupted only once for the regularly scheduled five day time block in Health. This occurred between January 22nd, and January 28th, 1976.

Overview of Each Experimental Session. The lesson plan formulated for this study includes several aspects of the suggested teaching techniques, and activities outlined by Turner (1957) and Penrod (1970). The plan included a daily seven (7) minute warm-up period. This was followed by an eighteen (18) minute presentation of new jazz fundamentals. Each session ended with a twenty (20) minute period devoted to group work on a dance number to be used as the post-test of performance. The group work began on the fourth day of class; after the seventh day of class, the time allotted for group work was extended to thirty-eight (38) minutes. The presentation of new jazz fundamentals was consistently presented with teacher demonstration first, followed by a walk through of the skill using a follow the leader (the teacher) method. The skill was then tried with the application of the experimental variable: percussion instrument, unfamiliar music, or familiar music in the respective groups. The follow the leader method was again used when first applying the experimental variables. Students then recreated the movement alone. This allowed teacher observation to correct student errors during the movement skill reproduction.

Selection of the Experimental Variables. The music selections used were chosen by the researcher after listening to numerous albums and tapes by familiar and unfamiliar musical groups and individuals. The final



selections involved extensive dancing, trial and error by the author. This method was needed to adapt fundamental skills and their variations to the music to be used. The procedure also aided the researcher in planning well constructed and effective lessons for each class session and group. The specific selections used are presented in the detailed unit outlines for each group.

Unit Outline: Group I - Percussion Accompaniment

I. Warm-ups - seven (7) minutes (all class sessions).

Exercises - body stretches (lateral left and right; up and down), arm rotations, legs lifts, eight count waist bends, toe touches, lunges (left and right), swan dives, six count jumping jacks, arm stretch toe touches, arm coordinations.

II. Presentation of new fundamental - eighteen (18) minutes. (Fundamental is walked through with teacher, then tried to rhythm instrument previously taped to allow full teacher observation of student movement).

Day I - Lesson I - Introduction and general movement session.

(Character Study and statues following teacher demonstrations of positions to be recreated).

Day II - Lesson II - Pre-Test (entire period after warm-ups) Video-taped. The pre-test consisted of simple jazz steps done in unison, a turn, leap, extensions and walks. Students executed the movement after teacher demonstration in a follow the leader manner.

Day III - Lesson III - Walks -- Rhythm Sticks used.

- Day IV - Lesson IV - Runs -- Tambourines used; review walks, group work on dance number begins, Music: OYA MAMA from Super-fly TNT, basically a percussion composition. (twenty (20) minutes)
- Day V - Lesson V - Jumps -- Tambourines used; review walks and runs; continue group work on dance number.
- Day VI - Lesson VI - Leaps -- Drum used; review previous fundamentals and continue group work.
- Day VII - Lesson VII - Extensions -- Drum and Rhythm sticks used; review and group work.
- Day VIII - Lesson VIII - Group work on dance number as a class and in small groups for better teacher observation. (entire class period after warm-ups) thirty-eight (38) minutes.
- Day IX - Lesson IX - Same as Lesson VIII.
- Day X - Lesson X - Post-Test -- the dance number (entire period after warm-ups), Video-taped.

Unit Outline: Group II - Unfamiliar Music Group

- I. Warm-ups - seven (7) minutes (all class sessions).  
Exercises - the same as for group I.
- II. Presentation of new fundamental - eighteen (18) minutes. (Procedure the same as that of group I).
- Day I - Lesson I - Introduction and general session. (Same as for group I).
- Day II - Lesson II - Pre-Test (entire class period after warm-ups), Video-taped. The pre-test was the same for group I and II.



- Day III - Lesson III - Walks -- Music: March From A Clockwork Orange by Walter Carlos.
- Day IV - Lesson IV - Runs -- Music: Beethoven: Ninth Symphony, Second Movement by Walter Carlos; review walks; group work on dance number begins, Music: March From A Clockwork Orange, Beethoven: Ninth Symphony: Fourth Movement, Abridged.
- Day V - Lesson V - Jumps -- Music: The Thieving Magpie by Walter Carlos; review walks and runs; group work continued. (twenty (20) minutes beginning Lesson IV).
- Day VI - Lesson VI - Leaps -- Music: Same as Day V; review previous fundamentals; continue group work.
- Day VII - Lesson VII - Extensions -- Music: Title Music From A Clockwork Orange by Walter Carlos; review and group work.
- Day VIII - Lesson VIII - Group work on dance number as a class and in small groups for better teacher observation. (entire class period after warm-ups) - thirty-eight (38) minutes.
- Day IX - Lesson IX - Same as Day VIII.
- Day X - Lesson X - Post-Test -- the dance number (entire class period after warm-ups), Video-taped.

Unit Outline: Group III - Familiar Music Group

- I. Warm-ups - seven (7) minutes (all class sessions).  
Exercises - the same as for group I and group II.
- II. Presentation of new fundamental - eighteen (18) minutes. (Procedure the same as for group I and group II).

- Day I - Lesson I - Introduction and general session. (Same as for previous groups).
- Day II - Lesson II - Pre-Test (entire period after warm-ups), Video-taped. The pre-test was the same for group I and II and III.
- Day III - Lesson III - Walks -- Music: Dead End from Quincy Jones' Walking In Space.
- Day IV - Lesson IV - Runs -- Music: Theme from Television Series S W A T; review walks, group work on dance number begins, Music: Shaft Strikes Again from Issac Hayes' Shaft. (twenty (20) minutes).
- Day V - Lesson V - Jumps -- Music: Baby What You Want Me To Do from Mongo Santamarias' Soul Bag; review previous fundamentals; continue group work
- Day VI - Lesson VI - Leaps -- Music: Hot Dog from Mongo Santamarias' Soul Bag; review and continue group work.
- Day VII - Lesson VII - Extensions -- Music: Main Theme From Trouble Man by Marvin Gaye; review and group work.
- Day VIII - Lesson VIII - Group work on dance number as a class and in small groups for better teacher observation. (entire class period after warm-ups) - thirty-eight (38) minutes.
- Day IX - Lesson IX - Same as for Day VIII.
- Day X - Lesson X - Post-Test -- the dance number (entire class period after warm-ups), Video-taped.

#### Selection and Function of Judges

Selection and Function. Three faculty members of the Dance Division

of The University of North Carolina at Greensboro, served as judges of subject performance. Judgments involved the evaluation of dancers before and after the ten lesson sequence of instruction. Judges were chosen because of their expertise in the areas of dance and movement. The judges task was to evaluate individual subject performance from video-taped sessions of the pre and post instructional performances.

Rating Form Development. The rating form used in the evaluation of subject pre and post performance was adopted by the researcher after careful study of several other rating forms. The latter was suggested by the conductor of Dance at The University of North Carolina at Greensboro.

The final method for quantifying performance in the present study called for scaled judgments. The designation of one to five was used as follows: five (5) represented excellent performance; four (4) good; three (3) satisfactory; two (2) poor; and one (1) unsatisfactory. The major criteria for pre-instructional evaluation included grace co-ordination and balance and composition. Final judgments were made of the same standards and three additional criteria: Rhythmic response, facial expression and dynamics. Judgments made with respect to the separate criteria were used only for descriptive purposes.

Preparation of Judges Instructions. Instructions for judges were designed by the researcher to explain the pre and post test construction. They further explained how rating was to be done and supplied definitions of terms used in the evaluation. The criteria evaluated was adopted from combining dance terms from several of the rating forms reviewed and terms used to judge figure skating. Each judge was supplied with a detailed packet containing completed instructions and explanations of criteria to

be rated, and rating forms for each test. The content of the judges packet are presented in the appendix. See page 63 for instructions to judges. The post study procedure and focuses were the same as those used by the evaluator with respect to the initial evaluation.

#### Video-Taping Procedure

Video-taping. Each group was video-taped twice during the study. The second day of class each group was taped in order to establish a record which was interpreted as the pre-study performance. The post-study performance was recorded on the last day of class. In both instances, the subjects in each group were sub-divided into smaller groups of four or five students for taping purposes. Each student was given a set of numbers to wear front and back. This was their only means of identification. The researcher carefully identified subjects' numbers to ensure that students used the same number for both taping sessions. The video-tapes were used by the judges for the purpose of evaluating subject performance in the pre and post study sessions. The researcher chose video-taping to make it convenient for judges to observe subjects simultaneously. Video-taping also eliminated the need for travel by judges to observe subjects, since the study was conducted in Danville, Virginia. Furthermore, tape observation allowed for repeated observation as often as judges felt necessary to make their evaluations.

#### Analytic Procedures

Statistical. The judges ratings were first treated individually to get a composite mean score for each subject on both the pre and post-test. Composite means were then combined for all judges to determine a pre-test

mean and a post-test mean for each subject in the three groups. From these findings the difference between the post-test mean and the pre-test mean was found for each subject. Those differences were used in calculating the Wilcoxon Matched-Pairs Sign-Ranks Test, which sought to determine the relative magnitude as well as the difference in subjects pre and post instructional performance. Summation differences of the composite mean scores for each subject were used in application of the Kruskal-Wallis One-Way Analysis of Variance by Ranks, which was utilized to decide whether the differences between pre and post ratings among the group signified genuine population differences or whether they represent merely chance variations such as are to be expected among several random samples from the same population (Siegel, 1956).

Descriptive. Grace, co-ordination and balance, and composition were the specific criteria described in the analysis. This was accomplished by averaging the separate ratings of each of the three judges. These criteria were selected because both pre-instructional and post-instructional data were available. On the post-instructional evaluations, judges also considered rhythmic response, facial expression, and dynamics. These factors were used to help judges identify performance features that could assist in their evaluation. Thus, they showed up in the composite mean. At the suggestion of her co-advisor, it was decided not to attempt similar judgments at the outset of the research because it was premature for the subjects to establish recognizable patterns of rhythmic response, facial expression, and dynamics.



CHAPTER IV  
DATA AND ANALYSIS

The data collected in order to answer the questions which framed this study was numerical. It derived from the quantification of judgments about the subjects pre and post instructional performance made by the three dance experts as described in the previous chapter. The "scores" assigned each subject were either ranked, summated and/or average according to the specific statistical treatment invoked. This chapter presents the data and analysis from which final conclusions to this study were drawn.

Data

Tables 1.1, 1.2, 1.3 outline pre-instructional performance ratings for group I -- Percussion Accompaniment; tables 2.1, 2.2, 2.3, show pre-instructional performance ratings for group II -- Unfamiliar Music; tables 3.1, 3.2 and 3.3 outline pre-instructional performance ratings for group III -- Familiar Music. All tables also show mean scores and judges names for the set of ratings presented. Tables 4.1, 4.2, 4.3 show post-instructional performance ratings for group I -- Percussion Accompaniment; tables 5.1, 5.2, 5.3 show post-instructional performance ratings for group II -- Unfamiliar Music; tables 6.1, 6.2, 6.3 show post-instructional performance ratings for group III -- Familiar Music. Mean scores and judges names are also indicated for each set of ratings.

TABLE 1.1

PRE-INSTRUCTIONAL PERFORMANCE RATINGS  
Group I -- Percussion Accompaniment

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	MEANS
1	2	2	2	2.00
2	3	3	3	3.00
3	3	2	2	2.33
4	2	2	2	2.00
5	1	1	2	1.33
6	1	1	1	1.00
7	2	2	1	1.67
8	2	2	1	1.67
9	2	2	2	2.00
10	3	3	2	2.67
11	3	3	2	2.67
12	2	2	2	2.00
13	4	3	3	3.33
14	3	3	2	2.67
15	2	2	2	2.00
16	1	1	1	1.00
17	2	2	2	2.00
18	3	2	2	3.00
19	2	2	2	2.00
Means	2.26	2.16	1.95	2.12

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME L. Andreasen



TABLE 1.2  
 PRE-INSTRUCTIONAL PERFORMANCE RATINGS  
 Group I -- Percussion Accompaniment

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	MEANS
1	2	2	2	2.00
2	3	3	3	3.00
3	3	2	2	2.33
4	3	3	3	3.00
5	1	2	1	1.33
6	1	2	2	1.66
7	3	2	2	2.33
8	3	3	3	3.00
9	3	3	3	3.00
10	4	4	4	4.00
11	3	3	3	3.00
12	4	4	4	4.00
13	3	4	3	3.33
14	2	3	3	2.67
15	3	3	4	3.33
16	1	1	1	1.00
17	3	3	3	3.00
18	4	4	4	4.00
19	3	3	3	3.00
Means	2.74	2.84	2.79	2.79

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME Anne Deloria

TABLE 1.3  
 PRE-INSTRUCTIONAL PERFORMANCE RATINGS  
 Group I -- Percussion Accompaniment

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	MEANS
1	3	3	3	3.00
2	4	3	3	3.33
3	2	1	1	1.33
4	3	3	2	2.67
5	3	3	1	2.33
6	3	2	2	2.33
7	4	3	3	3.33
8	3	3	3	3.00
9	3	3	3	3.00
10	4	4	4	4.00
11	4	3	4	3.67
12	3	3	3	3.00
13	4	4	4	4.00
14	3	3	3	3.00
15	4	4	4	4.00
16	1	1	1	1.00
17	3	3	3	3.00
18	4	4	4	4.00
19	3	3	3	3.00
Means	3.21	2.95	2.84	3.00

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME Gayle Wulk

TABLE 2.1

PRE-INSTRUCTIONAL PERFORMANCE RATINGS  
Group II -- Unfamiliar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	MEANS
1	2	2	2	2.00
2	3	3	2	2.67
3	1	1	1	1.00
4	3	2	3	2.67
5	2	2	2	2.00
6	3	2	2	2.33
7	2	2	2	2.00
8	3	3	3	3.00
9	3	3	3	3.00
10	2	2	2	2.00
11	3	3	3	3.00
12	3	2	2	2.33
13	2	2	2	2.00
14	2	1	1	1.33
15	3	3	3	3.00
16	2	1	2	1.67
17	3	2	2	2.33
18	4	3	3	3.33
19	2	2	2	2.00
20	4	3	3	3.33
21	2	2	2	2.00
22	3	3	3	3.00
23	3	2	3	2.67
Means	2.61	2.22	2.30	2.38

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME L. Andreasen

TABLE 2.2

PRE-INSTRUCTIONAL PERFORMANCE RATINGS  
Group II -- Unfamiliar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	MEANS
1	1	1	1	1.00
2	3	2	3	2.67
3	1	1	2	1.33
4	3	2	3	2.67
5	1	1	2	1.33
6	2	2	2	2.00
7	2	2	2	2.00
8	3	3	3	3.00
9	2	2	2	2.00
10	2	1	2	1.67
11	2	2	2	2.00
12	2	2	2	2.00
13	2	1	2	1.67
14	2	1	2	1.67
15	2	2	2	2.00
16	2	2	2	2.00
17	2	2	3	2.33
18	2	2	2	2.00
19	2	1	2	1.67
20	3	3	3	3.00
21	2	1	2	1.67
22	3	3	3	3.00
23	2	1	2	1.67
Means	2.09	1.74	2.22	2.02

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME     Anne Deloria

TABLE 2.3

PRE-INSTRUCTIONAL PERFORMANCE RATINGS  
Group II -- Unfamiliar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	MEANS
1	1	2	2	1.67
2	4	3	3	3.33
3	1	2	2	1.67
4	4	4	4	4.00
5	2	3	1	2.00
6	3	2	2	2.33
7	3	2	1	2.00
8	4	4	3	3.67
9	3	2	3	2.67
10	1	1	1	1.00
11	4	4	3	3.67
12	3	3	3	3.00
13	2	2	2	2.00
14	2	2	2	2.00
15	2	2	3	2.33
16	3	3	3	3.00
17	2	1	1	1.33
18	3	3	3	3.00
19	2	2	2	2.00
20	3	3	4	3.33
21	1	2	2	1.67
22	4	4	4	4.00
23	3	3	4	3.33
Means	2.61	2.57	2.52	2.57

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME Gayle Wulk

TABLE 3.1

PRE-INSTRUCTIONAL PERFORMANCE RATINGS  
Group III -- Familiar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	MEANS
1	4	3	2	3.00
2	2	2	1	1.67
3	3	2	2	2.33
4	3	2	3	2.67
5	4	4	3	3.67
6	4	4	3	3.67
7	3	3	3	3.00
8	2	3	3	2.67
9	3	3	2	2.67
10	4	3	3	3.33
11	2	3	3	2.67
12	4	4	3	3.67
13	2	3	3	2.67
14	2	2	3	2.33
15	2	2	2	2.00
16	2	2	2	2.00
17	3	2	3	2.67
18	3	3	3	3.00
19	3	2	3	2.67
20	3	3	3	3.00
21	3	3	3	3.00
22	3	3	3	3.00
Means	2.91	2.77	2.68	2.79

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME L. Andreasen



TABLE 3.2

PRE-INSTRUCTIONAL PERFORMANCE RATINGS  
Group III -- Familiar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	MEANS
1	2	1	2	1.67
2	1	1	1	1.00
3	1	2	1	1.33
4	3	2	3	2.67
5	4	3	4	3.67
6	4	4	4	4.00
7	4	4	3	3.67
8	3	2	2	2.33
9	3	2	3	2.67
10	3	2	3	2.67
11	3	2	2	2.33
12	3	3	3	3.00
13	3	2	3	2.67
14	2	3	3	2.67
15	2	2	2	2.00
16	3	2	2	2.33
17	3	2	3	2.67
18	2	1	2	1.67
19	2	2	2	2.00
20	3	3	3	3.00
21	3	3	3	3.00
22	3	3	3	3.00
Means	2.73	2.32	2.59	2.55

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME     Anne Deloria

TABLE 3.3

PRE-INSTRUCTIONAL PERFORMANCE RATINGS  
Group III -- Familiar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	MEANS
1	3	3	3	3.00
2	2	2	2	2.00
3	2	2	2	2.00
4	3	2	2	2.33
5	4	3	3	3.33
6	5	4	5	4.67
7	4	3	3	3.33
8	2	2	2	2.00
9	1	1	1	1.00
10	3	2	3	2.67
11	2	2	2	2.00
12	4	3	4	3.67
13	3	2	2	2.33
14	2	2	2	2.00
15	2	2	3	2.33
16	3	2	2	2.33
17	1	1	1	1.00
18	2	2	2	2.00
19	2	2	2	2.00
20	3	3	3	3.00
21	1	2	1	1.33
22	3	3	2	2.67
Means	2.59	2.27	2.36	2.41

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME Gayle Wulk

TABLE 4.1

 POST-INSTRUCTIONAL PERFORMANCE RATINGS  
 Group I -- Percussion Accompaniment

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC RESPONSE	FACIAL EXPRESSION	DYNAMICS	MEANS
1	4	4	4	4	3	3	3.67
2	4	3	3	4	3	2	3.17
3	4	3	3	3 a	3	2	3.00
4	3	3	3	4	3	3	3.17
5	3	3	4	4	2	2	3.00
6	3	3	2	2 a	2	2	2.33
7	2	2	1	1 a	2	2	1.67
8	3	3	3	2 a	2	2	2.50
9	4	4	3	4	3	4	3.67
10	3	4	3	4	3	4	3.67
11	4	4	4	4	3	3	3.33
12	3	3	3	4	3	4	3.83
13	4	4	5	4	4	3	3.17
14	4	4	4	4	4	3	4.00
15	4	4	5	4	3	3	3.67
16	2	2	1	4	4	4	4.17
17	4	4	5	2 a	1	1	1.50
18	5	4	5	3 b	4	4	4.00
19	4	4	5	4	4	5	4.50
						4	4.17

Means            3.53                    3.42                    3.47                    3.42                    2.95                    2.95                    3.29

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME L. Andreasen

TABLE 4.2

POST-INSTRUCTIONAL PERFORMANCE RATINGS  
Group I -- Percussion Accompaniment

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC RESPONSE	FACIAL EXPRESSION	DYNAMICS	MEANS
1	4	3	3	4	3	3	3.33
2	3	3	3	3 a	3	3	3.00
3	3	3	3	4	3	3	3.17
4	3	2	3	2	3	3	2.67
5	3	4	3	4	3	3	3.33
6	4	2	2	3 a	3	2	2.67
7	3	1	1	2 a	2	1	1.67
8	3	3	3	4	3	2	3.00
9	4	3	4	4	3	3	3.50
10	3	3	3	4	3	3	3.17
11	4	3	3	4	3	3	3.33
12	4	3	3	4	3	3	3.33
13	4	4	4	4	3	4	3.83
14	4	3	3	4	3	3	3.33
15	4	3	4	4	3	4	3.66
16	3	1	1	1 a	2	1	1.50
17	4	3	3	3 b	3	3	3.17
18	4	3	5	4	3	2	3.50
19	4	4	3	4	3	3	3.50
Means	3.58	2.84	3.00	3.47	2.89	2.74	3.09
Rating Scale:	5= excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory						

YOUR NAME Anne Deloria

TABLE 4.3

 POST-INSTRUCTIONAL PERFORMANCE RATINGS  
 Group I -- Percussion Accompaniment

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC RESPONSE	FACIAL EXPRESSION	DYNAMICS	MEANS
1	4	3	4	4	3	4	3.67
2	3	3	3	3 a	3	3	3.00
3	3	3	2	2 a	3	2	2.50
4	3	3	3	3 a	3	2	2.83
5	3	3	4	3 a	3	2	3.00
6	3	3	2	4	3	3	3.00
7	2	3	1	4	3	2	1.17
8	2	2	2	3 a	3	2	2.33
9	5	4	4	5	3	4	4.17
10	3	3	3	3 a	3	2	2.83
11	4	3	3	3 b	3	3	3.17
12	3	3	3	3 a	3	1	2.67
13	5	5	4	4 a	3	4	4.17
14	3	4	3	3 a	3	3	3.17
15	4	4	4	4	3	4	3.83
16	3	2	1	1 a	1	1	1.50
17	3	3	3	3 a	3	3	3.00
18	4	4	4	4	3	4	3.83
19	4	5	5	5	3	4	4.33
Means	3.37	3.32	3.05	3.37	2.89	2.79	3.06

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

 YOUR NAME Gayle Wulk

TABLE 5.1

 POST-INSTRUCTIONAL PERFORMANCE RATINGS  
 Group II -- Unfamiliar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC RESPONSE	FACIAL EXPRESSION	DYNAMICS	MEANS
1	3	3	4	4	3	3	3.33
2	3	4	4	4	3	3	3.50
3	3	3	3	4	3	3	3.17
4	3	3	3	3 a	3	3	3.00
5	4	4	4	4	3	4	3.83
6	3	3	4	4	3	3	3.33
7	4	4	5	4	3	3	3.83
8	4	3	4	3 a	3	3	3.33
9	4	3	4	5	3	3	3.67
10	3	3	3	3 a	3	2	2.83
11	5	5	5	5	3	4	4.50
12	3	3	3	3 a	3	3	3.00
13	4	4	5	4	3	4	4.00
14	3	3	4	4	3	2	3.17
15	3	3	3	4	3	3	3.17
16	4	5	5	5	3	4	4.33
17	4	4	5	3 a	3	3	3.67
18	4	4	4	4	3	3	3.67
19	3	3	3	3 b	3	3	3.00
20	3	3	3	3 b	3	2	2.83
21	4	4	4	3 b	3	3	3.50
22	4	5	4	4	3	4	4.00
23	4	4	5	4	3	4	4.00

Means            3.57            3.61            4.00            3.78            3.00            3.13            3.51  
 Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME L. Andreasen



TABLE 5.2

POST-INSTRUCTIONAL PERFORMANCE RATINGS  
Group II -- Unfamiliar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC RESPONSE	FACIAL EXPRESSION	DYNAMICS	MEANS
1	3	2	2	3 a	3	2	2.50
2	3	2	2	3 a	3	2	2.50
3	2	2	2	3 b	3	2	2.33
4	3	2	2	3 a	3	2	2.50
5	3	3	3	3 b	3	2	2.83
6	4	3	3	3 a	3	2	3.00
7	4	3	3	4	3	3	3.33
8	3	3	3	4	3	2	3.00
9	3	3	3	3 a	3	2	2.83
10	4	3	4	3 a	3	2	3.17
11	5	5	4	4	3	4	4.17
12	4	4	4	4	3	3	3.67
13	4	3	3	4	3	3	3.33
14	4	3	3	3 a	3	2	3.00
15	3	3	2	4	3	2	2.83
16	4	3	3	4	3	2	3.17
17	4	4	3	4	3	3	3.50
18	4	3	3	3 a	3	2	3.00
19	3	2	2	3 a	3	2	2.50
20	3	2	2	3 a	3	2	2.50
21	3	2	3	3 a	3	2	2.67
22	4	3	3	3 b	3	3	3.17
23	4	3	3	3 b	3	3	3.17

Means            3.52            2.87            2.83            3.35            3.00            2.35            2.99  
 Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME           Anne Deloria

TABLE 5.3

 POST-INSTRUCTIONAL PERFORMANCE RATINGS  
 Group II -- Unfamiliar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC RESPONSE	FACIAL EXPRESSION	DYNAMICS	MEANS
1	4	4	4	4	3	3	3.67
2	3	3	3	3 a	3	3	3.00
3	3	2	1	2 b	3	2	2.17
4	4	4	4	4	3	3	3.67
5	3	3	2	3 a	3	2	2.67
6	3	3	2	2 a	3	2	2.50
7	4	4	3	4	3	4	3.67
8	3	3	3	3 a	3	3	3.00
9	3	3	3	3 a	3	2	2.83
10	2	2	1	2 a	3	2	2.00
11	5	5	5	5	3	5	4.67
12	4	4	4	3 b	3	3	3.50
13	4	3	4	3 b	3	4	3.50
14	3	3	2	2 a	3	2	2.33
15	3	3	3	4	3	3	3.17
16	4	4	4	4	3	5	4.00
17	4	4	4	4	3	3	3.67
18	3	3	3	3 a	3	2	2.83
19	3	3	2	3 a	3	2	2.67
20	3	3	2	3 a	3	2	2.67
21	3	2	2	2 a	3	2	2.33
22	3	3	4	4	3	3	3.33
23	3	3	4	4	3	3	3.33

Means 3.35 3.22 3.00 3.22 3.00 2.83 3.09  
 Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME Gayle Wulk

TABLE 6.1

POST-INSTRUCTIONAL PERFORMANCE RATINGS  
Group III -- Familiar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC RESPONSE	FACIAL EXPRESSION	DYNAMICS	MEANS
1	5	4	5	4	3	3	4.00
2	4	4	3	4	3	3	3.50
3	4	3	4	4	3	3	3.50
4	5	5	5	5	3	4	4.50
5	4	5	5	4	3	4	4.17
6	5	5	5	5	3	4	4.50
7	5	4	5	4	3	4	4.17
8	4	4	5	4	3	3	3.83
9	5	5	5	5	4	4	4.67
10	4	3	4	4	3	3	3.50
11	4	4	4	4	4	3	3.83
12	5	5	5	5	4	4	4.67
13	3	4	4	4	3	3	3.50
14	5	4	4	4	3	3	3.83
15	4	4	5	4	3	3	3.83
16	4	4	4	3 a	3	3	3.50
17	4	4	5	4	3	3	3.83
18	3	4	4	3 a	3	2	3.17
19	3	3	5	3 a	3	2	3.17
20	5	5	5	5	3	4	4.50
21	4	4	5	4	3	3	3.83
22	4	4	5	4	3	3	3.90

MEANS            4.23            4.14            4.59            4.09            3.14            3.23            3.90  
 Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME    L. Andreasen

TABLE 6.2

POST-INSTRUCTIONAL PERFORMANCE RATINGS  
Group III -- Familiar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC RESPONSE	FACIAL EXPRESSION	DYNAMICS	MEANS
1	4	3	3	4	3	2	3.17
2	3	2	3	3 a	3	2	2.67
3	4	3	3	4	3	3	3.33
4	5	3	4	4	3	3	3.67
5	4	3	3	4	3	3	3.33
6	3	3	3	4	3	3	3.17
7	4	3	3	4	3	3	3.33
8	4	3	3	3 b	3	3	3.17
9	3	3	3	3 a	3	3	3.00
10	3	3	3	3 a	3	3	3.00
11	3	3	3	3 a	3	2	2.83
12	4	3	4	4	3	3	3.50
13	3	4	3	4	3	3	3.33
14	4	4	3	4	3	3	3.50
15	4	4	3	4	3	3	3.50
16	3	3	4	3 a	3	3	3.17
17	3	3	3	4	3	2	3.00
18	3	3	3	3 a	3	3	3.00
19	4	4	3	4	3	3	3.50
20	4	5	4	4	3	4	4.00
21	4	4	3	4	3	3	3.50
22	4	3	3	4	3	3	3.33

Means 3.64 3.27 3.18 3.68 3.00 2.86 3.27  
 Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME     Anne Deloria

TABLE 6.3

POST-INSTRUCTIONAL PERFORMANCE RATINGS  
Group III -- Familiar Music

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC RESPONSE	FACIAL EXPRESSION	DYNAMICS	MEANS
1	4	4	4	4	3	3	3.67
2	3	3	3	3 a	3	2	2.83
3	4	3	3	3 a	3	3	2.17
4	4	4	4	5	3	4	4.00
5	4	3	3	3 a	3	3	3.17
6	3	3	3	4	3	3	3.17
7	4	3	3	3 a	3	3	3.17
8	3	3	3	4	3	3	3.17
9	3	2	3	2 b	3	2	2.50
10	3	3	3	3 a	3	2	2.83
11	3	3	3	3 b	3	3	3.00
12	3	3	3	3 a	3	2	2.83
13	3	3	3	3 a	3	3	3.00
14	4	3	4	4	3	3	3.50
15	3	3	2	3 a	3	2	2.67
16	3	3	2	3 b	3	3	2.83
17	4	4	3	4	3	3	3.50
18	3	3	3	3 b	3	3	3.00
19	3	3	3	4	3	3	3.17
20	3	3	3	3 b	3	3	3.00
21	4	3	4	4	3	3	3.50
22	4	4	5	4	3	4	4.00

Means            3.41            3.14            3.18            3.41            3.00            2.86            3.17

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME           Gayle Wulk

### Analysis

Statistical. Several operations were performed on the obtained data in order to carry out statistical treatments. Table 7.1, 7.2, and 7.3 report the assigned values by each judge for subject according to experimental groups. The tables also indicate pre and post instructional means derived from these values and the raw differences between means. Finally, the tables present the ranking of differences and signs of the rankings used in the Wilcoxon Test.

Considerations of the nature of the numerical scores obtained and the conditions under investigation, it was decided that non-parametric statistical techniques could be applicable in the analysis of data. To determine the answer to question one posed on page 3, it was decided that the Wilcoxon-Matched Pairs-Sign-Ranks Test would be applied to the data. This test was chosen because it reveals the relative magnitude as well as the direction of difference before and after instruction. Furthermore, the statistic is applicable to three related groups and the composite pre and post means were decided suitable representative values of the three judges ratings.

The summation of values obtained for group I, which was exposed to percussion accompaniment, was an obtained T value of 6. Group II experienced unfamiliar music, the comparison of their pre and post performance by the Wilcoxon Test yielded a T value of 6. For the group exposed to familiar music as their accompaniment, the calculated Wilcoxon value of T was 1. The table of critical values of T (Siegel, 1956, pp. 254), revealed that all differences were significant at the .01 probability level.



Kruskal-Wallis One-Way Analysis of Variance by Ranks. In order to determine if differences were merely due to chance or whether they might be attributed to the Experimental Variable, the Kruskal-Wallis One-Way Analysis of Variance by Ranks was calculated. Tables 8.1, 8.2, and 8.3 represent the differences and ranks of differences of pre and post instructional ratings when judges evaluations were summated. Utilizing the following formula,

$$H = \frac{12}{N(N+1)} \sum_{j=1}^k \frac{R_j^2}{n_j} - 3(N+1)$$

and substituting the values below:

$$H = \frac{12}{63(63+1)} \left[ \frac{(458.5)^2}{19} + \frac{(808.0)^2}{23} + \frac{(749.5)^2}{21} \right] - 3(63+1)$$

an H of 5.01701 was obtained. This value was corrected for ties to 5.01821. According to the table of Critical Values (Siegel, 1956, p.249) utilized, this figure was not statistically significant at the .05 probability level. This value was significant at the .10 probability level.

TABLE 7.1

MEAN DIFFERENCES, RANKS, AND RANK-SIGN DIFFERENCES  
OF PRE-INSTRUCTIONAL AND POST-INSTRUCTIONAL  
MEANS FOR ALL JUDGES FROM COMPOSITE  
PERFORMANCE  
Group I -- Percussion Accompaniment

S No.	Pre-Test			Pre-Test Mean	Post-Test			Post-Test Mean	d	Rank of diff.	Rank Sign
	A	D	W	A	D	W					
1	2.00	2.00	3.00	2.33	3.67	3.33	3.67	3.57	1.24	17	+
2	3.00	3.00	3.33	3.11	3.17	3.00	3.00	-3.06	.05	3	-
3	2.33	2.33	1.33	2.00	3.00	3.17	2.50	2.89	.89	14	+
4	2.00	3.00	2.67	2.56	3.17	2.67	2.83	2.89	.33	7.5	+
5	1.33	1.33	2.33	1.66	3.00	3.33	3.00	3.11	1.45	19	+
6	1.00	1.66	2.33	1.66	2.33	2.67	3.00	2.67	1.01	15	+
7	1.67	2.33	3.33	2.44	1.67	1.67	1.17	-1.50	.94	2	-
8	1.67	3.00	3.00	2.56	2.50	3.00	2.33	2.61	.05	4	+
9	2.00	3.00	3.00	2.67	3.67	3.50	4.17	3.78	1.11	16	+
10	2.67	4.00	4.00	3.56	3.33	3.17	2.83	-3.11	.45	2	-
11	2.67	3.00	3.67	3.11	3.83	3.33	3.17	3.44	.33	7.5	+
12	2.00	4.00	3.00	3.00	3.17	3.33	2.67	3.06	.06	5	+
13	3.33	3.33	4.00	3.55	4.00	3.83	4.17	4.00	.45	9	+
14	2.67	2.67	3.00	2.78	3.67	3.33	3.17	3.39	.61	11	+
15	2.00	3.33	4.00	3.11	4.17	3.66	3.83	3.89	.78	13	+
16	1.00	1.00	1.00	1.00	1.50	1.50	1.50	1.50	.50	10	+
17	2.00	3.00	3.00	2.67	4.00	3.17	3.00	3.39	.72	12	+
18	3.00	4.00	4.00	3.67	4.50	3.50	3.83	3.94	.27	6	+
19	2.00	3.00	3.00	2.67	4.17	3.50	4.33	4.00	1.33	18	+

Judges: A=Andreasen; D=Deloria; W=Wulk

N=19

TABLE 7.2

MEAN DIFFERENCES, RANKS, AND RANK-SIGN DIFFERENCES  
OF PRE-INSTRUCTIONAL AND POST-INSTRUCTIONAL  
MEANS FOR ALL JUDGES FROM COMPOSITE  
PERFORMANCE  
Group II -- Unfamiliar Music

S No.	Pre-Test			Pre-Test Mean	Post-Test			Post-Test Mean	d	Rank of diff.	Rank Sign
	A	D	W		A	D	W				
1	2.00	1.00	1.67	1.56	3.33	2.50	3.67	3.17	1.61	20.5	+
2	2.67	2.67	3.33	2.89	3.50	2.50	3.67	3.00	.11	4	+
3	1.00	1.33	1.67	1.33	3.17	2.33	2.17	2.56	1.23	16	+
4	2.67	2.67	4.00	3.11	3.00	2.50	3.67	-3.06	.05	3	-
5	2.00	1.33	2.00	1.78	3.83	2.83	2.67	3.11	1.33	17	+
6	2.33	2.00	2.33	2.22	3.33	3.00	2.50	2.97	.72	9	+
7	2.00	2.00	2.00	2.00	3.83	3.33	3.67	3.61	1.61	20.5	+
8	3.00	3.00	3.67	3.22	3.33	3.00	3.00	-3.11	.11	2	-
9	3.00	2.00	2.67	2.56	3.67	2.83	2.83	3.11	.55	7	+
10	2.00	1.67	1.00	1.56	2.83	3.17	2.00	2.67	1.11	14	+
11	3.00	2.00	3.67	2.89	4.50	4.17	4.67	4.45	1.56	18	+
12	2.33	2.00	3.00	2.44	3.00	3.67	3.50	3.39	.95	12	+
13	2.00	1.67	2.00	1.89	4.00	3.33	3.50	3.61	1.72	23	+
14	1.33	1.67	2.00	1.67	3.17	3.00	2.33	2.83	1.16	15	+
15	3.00	2.00	2.33	2.44	3.17	2.83	3.17	3.06	.62	8	+
16	1.67	2.00	3.00	2.22	4.33	3.17	4.00	3.83	1.61	20.5	+
17	2.33	2.33	1.33	2.00	3.67	3.50	3.67	3.61	1.61	20.5	+
18	3.33	2.00	3.00	2.78	3.67	3.00	2.83	3.17	.39	6	+
19	2.00	1.67	2.00	1.89	3.00	2.50	2.67	2.72	.83	10	+
20	3.33	3.00	3.33	3.22	2.83	2.50	2.67	-2.67	.55	1	-
21	2.00	1.67	1.67	1.78	3.50	2.67	2.33	2.83	1.05	13	+
22	3.00	3.00	4.00	3.33	4.00	3.17	3.33	3.50	.17	5	+
23	2.67	1.67	3.33	2.56	4.00	3.17	3.33	3.50	.94	11	+

Judges: A=Andreasen; D=Deloria; W=Wulk

N=23

TABLE 7.3

MEAN DIFFERENCES, RANKS, AND RANK-SIGN DIFFERENCES  
 OF PRE-INSTRUCTIONAL AND POST-INSTRUCTIONAL  
 MEANS FOR ALL JUDGES FROM COMPOSITE  
 PERFORMANCE  
 Group III -- Familiar Music

S No.	Pre-Test			Pre-Test Mean	Post-Test			Post-Test Mean	d	Rank of diff.	Rank Sign
	A	D	W		A	D	W				
1	3.00	1.67	3.00	2.56	4.00	3.17	3.67	3.61	1.05	11	+
2	1.67	1.00	2.00	1.56	3.50	2.67	2.83	3.00	1.44	20.5	+
3	2.33	1.33	2.00	1.89	3.50	3.33	3.17	3.33	1.44	20.5	+
4	2.67	2.67	2.33	2.56	4.50	3.67	4.00	3.67	1.11	14	+
5	3.67	3.67	3.33	3.56	4.17	3.33	3.17	3.56	0.00		
6	3.67	4.00	4.67	4.11	4.50	3.17	3.17	-3.61	.50	1	-
7	3.00	3.67	3.33	3.33	4.17	3.33	3.17	3.57	.24	4	+
8	2.67	2.33	2.00	2.33	3.83	3.17	3.17	3.39	1.06	12.5	+
9	2.67	2.67	1.00	2.11	4.67	3.00	2.50	3.39	1.28	17.5	+
10	3.33	2.67	2.67	2.89	3.50	3.00	2.83	3.11	.22	2.5	+
11	2.67	2.33	2.00	2.33	3.83	2.83	3.00	3.22	.89	9	+
12	3.67	3.00	3.67	3.45	4.67	3.50	2.83	3.67	.22	2.5	+
13	2.67	2.67	2.33	2.56	3.50	3.33	3.00	3.28	.72	5	+
14	2.33	2.67	2.00	2.33	3.83	3.50	3.50	3.61	1.28	17.5	+
15	2.00	2.00	2.33	2.11	3.83	3.50	2.67	3.33	1.22	16	+
16	2.00	2.33	2.33	2.22	3.50	3.17	2.83	3.17	.95	10	+
17	2.67	2.67	1.00	2.11	3.83	3.00	3.50	3.44	1.33	19	+
18	3.00	1.67	2.00	2.22	3.17	3.00	3.00	3.06	.84	7	+
19	2.67	2.00	2.00	2.22	3.17	3.50	3.17	3.28	1.06	12.5	+
20	3.00	3.00	3.00	3.00	4.50	4.00	3.00	3.83	.83	6	+
21	3.00	3.00	1.33	2.44	3.83	3.50	3.50	3.61	1.17	15	+
22	3.00	3.00	2.67	2.89	3.83	3.33	4.00	3.72	.86	8	+

Judges: A=Andreasen; D=Deloria; W=Wulk

N=21

TABLE 8.1

SUMMATION DIFFERENCES AND RANKS OF PRE-INSTRUCTIONAL  
AND POST-INSTRUCTIONAL RATINGS FOR ALL  
JUDGES FROM COMPOSITE PERFORMANCE  
Group I -- Percussion Accompaniment

S No.	Pre-Test			Σ of Pre-Test	Post-Test			Σ of Post-Test	d	Rank of diff. (R <sub>1</sub> )
	A	D	W		A	D	W			
1	2.00	2.00	3.00	7.00	3.67	3.33	3.67	10.67	3.67	47
2	3.00	3.00	3.33	9.33	3.17	3.00	3.00	9.17	-.16	7
3	2.33	2.33	1.33	5.99	3.00	3.17	2.50	8.67	2.68	33
4	2.00	3.00	2.67	7.67	3.17	2.67	2.83	8.67	1.00	17
5	1.33	2.33	4.99	3.00	3.33	3.00	3.00	9.33	4.34	55.5
6	1.00	1.66	2.33	4.99	2.33	2.67	3.00	8.00	3.01	37
7	1.67	2.33	3.33	7.33	1.67	1.67	1.17	4.51	-2.82	1
8	1.67	3.00	3.00	7.67	2.50	3.00	2.33	7.83	.16	8
9	2.00	3.00	3.00	8.00	3.67	3.50	4.17	11.34	3.34	43
10	2.67	4.00	4.00	10.67	3.33	3.17	2.83	9.33	-1.34	4
11	2.67	3.00	3.67	9.34	3.83	3.33	3.17	10.33	.99	16
12	2.00	4.00	3.00	9.00	3.17	3.33	2.67	9.17	.17	9
13	3.33	3.33	4.00	10.66	4.00	3.83	4.17	12.00	1.34	19
14	2.67	2.67	3.00	8.34	3.67	3.33	3.17	10.17	1.83	22
15	2.00	3.33	4.00	9.33	4.17	3.66	3.83	11.66	2.33	27
16	1.00	1.00	1.00	3.00	1.50	1.50	1.50	4.50	1.50	20
17	2.00	3.00	3.00	8.00	4.00	3.17	3.00	10.17	2.17	25.5
18	3.00	4.00	4.00	11.00	4.50	3.50	3.83	11.83	.83	15
19	2.00	3.00	3.00	8.00	4.17	3.50	4.33	12.00	4.00	52.5

Judges: A=Andreasen; D=Deloria; W= Wulk

N=19

Rank Total

458.5



TABLE 8.2

SUMMATION DIFFERENCES AND RANKS OF PRE-INSTRUCTIONAL  
AND POST-INSTRUCTIONAL RATINGS FOR ALL  
JUDGES FROM COMPOSITE PERFORMANCE  
Group II -- Unfamiliar Music

S No.	Pre-Test			Σ of Pre- Test	Post-Test			Σ of Post Test	d	Rank of diff. (R <sub>d</sub> )
	A	D	W		A	D	W			
1	2.00	1.00	1.67	4.67	3.33	2.50	3.67	9.50	4.83	60
2	2.67	2.67	3.33	8.67	3.50	2.50	3.00	9.00	.33	10
3	1.00	1.33	1.67	4.00	3.17	2.33	2.17	7.67	3.67	47
4	2.67	2.67	4.00	9.34	3.00	2.50	3.67	9.17	-.17	6
5	2.00	1.33	2.00	5.33	3.83	2.83	2.67	9.33	4.00	52.5
6	2.33	2.00	2.33	6.66	3.33	3.00	2.50	8.83	2.17	25.5
7	2.00	2.00	2.00	6.00	3.83	3.33	3.67	10.83	4.83	60
8	3.00	3.00	3.67	9.67	3.33	3.00	3.00	9.33	-.34	5
9	3.00	2.00	2.67	7.67	3.67	2.83	2.83	9.33	1.66	21
10	2.00	1.67	1.00	4.67	2.83	3.17	2.00	8.00	3.33	42
11	3.00	2.00	3.67	8.67	4.50	4.17	4.67	13.34	4.67	58
12	2.33	2.00	3.00	7.33	3.00	3.67	3.50	10.17	2.84	35.5
13	2.00	1.67	2.00	5.67	4.00	3.33	3.50	10.83	5.16	63
14	1.33	1.67	2.00	5.00	3.17	3.00	2.33	8.50	3.50	44.5
15	3.00	2.00	2.33	7.33	3.17	2.83	3.17	9.17	1.84	23
16	1.67	2.00	3.00	6.67	4.33	3.17	4.00	11.50	4.83	60
17	2.33	2.33	1.33	5.99	3.67	3.50	3.67	10.84	4.85	62
18	3.33	2.00	3.00	8.33	3.67	3.00	2.83	9.50	1.17	18
19	2.00	1.67	2.00	5.67	3.00	2.50	2.67	8.17	2.50	30
20	3.33	3.00	3.33	9.66	2.83	2.50	2.67	8.00	-1.66	2
21	2.00	1.67	1.67	5.34	3.50	2.67	2.33	8.50	3.16	38
22	3.00	3.00	4.00	10.00	4.00	3.17	3.33	10.50	.50	11
23	2.67	1.67	3.33	7.67	4.00	3.17	3.33	10.50	2.83	34

Judges: A=Andreasen; D=Deloria; W=Wulk

Rank Total 808.0

N=23



TABLE 8.3

SUMMATION DIFFERENCES AND RANKS OF PRE-INSTRUCTIONAL  
AND POST-INSTRUCTIONAL RATINGS FOR ALL  
JUDGES FROM COMPOSITE PERFORMANCE  
Group III -- Familiar Music

S. No.	Pre-Test			$\Sigma$ of Pre-Test	Post-Test			$\Sigma$ of Post Test	d	Rank of diff. (R <sub>3</sub> )
	A	D	W		A	D	W			
1	3.00	1.67	3.00	7.67	4.00	3.17	3.67	10.84	3.17	40
2	1.67	1.00	2.00	4.67	3.50	2.67	2.83	9.00	4.33	54
3	2.33	1.33	2.00	5.66	3.50	3.33	3.17	10.00	4.34	55.5
4	2.67	2.67	2.33	7.67	4.50	3.67	4.00	12.17	4.50	57
5	3.67	3.67	3.33	10.67	4.17	3.33	3.17	10.67	0.00	
6	3.67	4.00	4.67	12.34	4.50	3.17	3.17	10.84	-1.50	3
7	3.00	3.67	3.33	10.00	4.17	3.33	3.17	10.67	.67	14
8	2.67	2.33	2.00	7.00	3.83	3.17	3.17	10.17	3.17	40
9	2.67	2.67	1.00	6.34	4.67	3.00	2.50	10.17	3.83	49.5
10	3.33	2.67	2.67	8.67	3.50	3.00	2.83	9.33	.66	12.5
11	2.67	2.33	2.00	7.00	3.83	2.83	3.00	9.66	2.66	32
12	3.67	3.00	3.67	10.34	4.67	3.50	2.83	11.00	.66	12.5
13	2.67	2.67	2.33	7.67	3.50	3.33	3.00	9.83	2.16	24
14	2.33	2.67	2.00	7.00	3.83	3.50	3.50	10.83	3.83	49.5
15	2.00	2.00	2.33	6.33	3.83	3.50	2.67	10.00	3.67	47
16	2.00	2.33	2.33	6.66	3.50	3.17	2.83	9.50	2.84	35.5
17	2.67	2.67	1.00	6.34	3.83	3.00	3.50	10.33	3.99	51
18	3.00	1.67	2.00	6.67	3.17	3.00	3.00	9.17	2.50	30
19	2.67	2.00	2.00	6.67	3.17	3.50	3.17	9.84	3.17	40
20	3.00	3.00	3.00	9.00	4.50	4.00	3.00	11.50	2.50	30
21	3.00	3.00	1.33	7.33	3.83	3.50	3.50	10.83	3.50	44.5
22	3.00	3.00	2.67	8.67	3.83	3.33	4.00	11.16	2.49	28
									Rank Total	749.5

Judges: A=Andreasen; D=Deloria; W=Wulk

N=21

Description of Selected Criteria. Differences in judgment according to grace, co-ordination and balance and composition are presented in Table 9. Group I which experienced the Percussion Accompaniment exhibited the least observable rating difference; .64 with respect to composition; .44 with respect to co-ordination and balance; and .75 with respect to grace. Group III, subjects whose instruction was accompanied by Familiar Music earned the highest post-instructional performance rating differences in composition and co-ordination and balance, 1.11 and 1.07 respectively. However, they had a 1.02 in grace, which was a slightly lower rating difference than the 1.04 for group II, the Unfamiliar Music Accompaniment Group. This group's rating differences varied; the lowest rating difference was .93 for composition, a 1.05 was the rating difference with respect to co-ordination and balance and was also the highest rating difference for this group.

TABLE 9

MEANS OF OBTAINED RATINGS FROM EACH JUDGE FOR EACH  
INDIVIDUAL ACCORDING TO SELECTED  
CRITERIA AND GROUP

	PRE-TEST			POST-TEST			MEAN DIFFERENCES		
	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>
Group I (Percussion Accompaniment-N=19)									
Judge A	2.26	2.16	1.95	3.53	3.42	3.47			
Judge B	2.74	2.84	2.79	3.58	2.84	3.00			
Judge C	3.21	2.95	2.84	3.37	3.32	3.05			
Mean	2.74	2.65	2.53	3.49	3.09	3.17	.75	.44	.64
Group II (Unfamiliar Music-N=23)									
Judge A	2.61	2.22	2.30	3.57	3.61	4.00			
Judge B	2.09	1.74	2.22	3.52	2.87	2.83			
Judge C	2.61	2.57	2.52	3.35	3.22	3.00			
Mean	2.44	2.18	2.35	3.48	3.23	3.28	1.04	1.05	.93
Group III (Familiar Music-N=21)									
Judge A	2.91	2.77	2.68	4.23	4.14	4.59			
Judge B	2.73	2.32	2.59	3.64	3.27	3.18			
Judge C	2.59	2.27	2.36	3.41	3.14	3.18			
Mean	2.74	2.45	2.54	3.76	3.52	3.65	1.02	1.07	1.11

Judges: A=Andreasen; B=Deloria; C=Wulk

d<sub>1</sub> = Grace difference of Means; d<sub>2</sub> = Co-ordination and balance difference of Means

d<sub>3</sub> = Composition differences of Means

## CHAPTER V

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The final chapter of this study summarizes the research, offers conclusions to the questions posed at the onset of the experiment and makes recommendations that have implications for physical educators who plan and teach modern jazz dance to junior high school girls.

Summary

The study was concerned with the nature and effectiveness of the rhythmic accompaniment in teaching Beginning Modern Jazz Dance. Sixty-three (63) ninth grade girls at O. Trent Bonner Junior High School, Danville, Virginia, served as subjects in this study. The experiment sought to identify and describe differences between pre and post instructional performance that might be attributed to the use of: (a) percussion instruments (b) unfamiliar music (c) familiar music during the jazz dance unit taught in the winter of 1976. The research spanned ten physical education classes which extended over three weeks due to an alternating Health and Physical Education block system. Subjects were organized in three groups according to scheduled physical education classes. Constants in the experiment were: warm-ups, presentation of new fundamental, review of previous fundamentals, group work on the dance. The accompaniment was the experimental variable applied during ten (10) instructional classes. Also, the teacher was the same for all three groups. Pre-instructional and post-instructional performance were recorded on video-tape and judged by three dance authorities who rated subjects

numerically on a five point scale using pre-determined criteria. The analysis of the ratings consisted of comparing pre and post instructional differences statistically and also of describing the results of the judges ratings.

### Conclusions

The following responses are offered to the questions set forth at the outset of this study: (a) How do students compare in their pre and post instructional performance considering their learning featured percussion instruments or unfamiliar music or familiar music for accompaniment? Students post-instructional performance was markedly superior for all groups. The Wilcoxon Matched-Pairs Sign-Ranks Test yielded T values which were significant at .01 for each group. (b) Are differences in pre and post instructional performance merely attributable to chance or may they be associated with the type of accompaniment experienced? The Kruskal-Wallis One-Way Analysis of Variance by Ranks Test (Siegel, 1956) was calculated to determine whether performance score differences might have been affected by the type of accompaniment utilized in each class, not merely by chance. It was reasoned that all subjects were in the ninth grade and all experienced identical conditions in teaching-learning sequences. If indeed the test showed the groups to be disparate, it could be inferred that differences might be associated with the experimental conditions. Rigid interpretation of the obtained H reveals that the groups exhibited sameness in their performances. Differences that might be associated with the accompaniment were only established at a probability level of .10. (c) How are (1) grace (2) co-ordination and balance (3) composition evaluated by judges before and after instruction? The



judges ratings of post-instructional performance was higher than pre-instructional performance ratings for each group. Group I which experienced the Percussion Accompaniment was assigned the lowest post-instructional performance rating difference in each of the three criteria grace, co-ordination and balance, and composition. Group III, subjects whose instruction was accompanied by Familiar Music earned the highest post-instructional performance rating differences in composition and co-ordination and balance. However, they had a slightly lower rating difference in grace than Group II, the Unfamiliar Music Accompaniment Group.

#### Recommendations

Careful consideration of the results of this study leads the researcher to offer the following recommendations: (a) Instructor of junior high school girls Modern Jazz Dance should utilize music rather than percussion instruments throughout the planning and teaching of lessons. The use of familiar music is preferable to unfamiliar music especially when grace, co-ordination and balance, and composition are considered as movement criteria for improvement goals. (b) While all three types of accompaniment were associated with subjects' improvement, Group I which was taught with percussion instruments reported boredom in the early lessons of the experiment. They also showed least improvement than the other two groups. If percussion instruments are used in instruction, the researcher proposed they be used briefly and mixed with musical experiences. (c) The use of the Teacher-Demonstration Follow the Leader method of instruction was found to be successful for the researcher and should be considered when working with groups. (d) With respect to



further research about the teaching-learning of modern jazz dance in junior high school more rigorous data analysis is desirable pending the feasibility of training judges. Also, research might be done to determine if a combination of accompaniments may be more effective than any one of the types used in this inquiry. Also the rating of performance at midpoint in the unit or even twice during the teaching-learning sequence might give further insight as to the potential of each type of accompaniment early or later in beginning level instruction.

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## APPENDIX A

## JUDGES PACKET

RATING EXPLANATIONS FOR EACH AREA CONSIDERED ON PRE-TEST AND POST-TEST  
 NOTE: ONLY THE FIRST THREE ITEMS WILL BE INCLUDED IN THE PRE-TEST.

	unsatisfactory	poor	satisfactory	good	excellent
GRACE	1 Extremely Awkward	2 Very Awkward	3 Slightly Awkward	4 graceful	5 Extremely Graceful
CO-ORDINATION & BALANCE	1 Extremely Clumsy	2 Very Clumsy	3 Steady	4 Very Smooth Movement	5 Extremely Smooth Movement
COMPOSITION	1 Very Poor Interpretation	2 Poor Interpretation	3 Adequate Interpretation	4 Very good Interpretation	5 Extremely good Interpretation
FACIAL EXPRESSION	1 No Expression	2 Unnatural Expression	3 Natural Expression	4 Very Expressive	5 Extremely Expressive
RHYTHMIC RESPONSE	1 a. too slow b. too fast	2 a. slow b. fast	3 a. slightly slow b. slightly fast	4 Smooth Rhythm	5 Extremely Smooth Rhythm
DYNAMICS	1 No Force	2 Slightly Forceful	3 Moderately Forceful	4 Very Forceful	5 Extremely Forceful

## PRE-INSTRUCTIONAL EVALUATION FORM:

JUDGES INFORMATION AND INSTRUCTIONS

I. JUDGES INFORMATION: The Pre-Instructional Evaluation will be conducted on the second day of the unit. It is comprised of simple jazz steps in unison, a turn and a leap. Students will execute the movements after teacher demonstration, in a follow the leader manner. The experimental variables will not be applied.

## II. JUDGES INSTRUCTIONS:

A. Before reviewing the groups for judging, please review the following definitions:

1. grace - beauty of movement
2. co-ordination and balance - control of mind over muscle;  
smoothness of movement
3. composition - interpretation and execution of movement  
from teacher demonstration
4. unsatisfactory - inadequate or insufficient quality
5. poor - not good in quality
6. satisfactory - adequate or sufficient quality
7. good - having desirable qualities
8. excellent - extremely favorable quality

B. Judges please place the number on the rating form beside the subject number, which shows where you feel each individual's performance falls in the areas indicated. Please note specific explanation of ratings found at the bottom of the rating form.

## PRE-INSTRUCTIONAL RATING FORM

GROUP: \_\_\_\_\_

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	COMMENT
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory

YOUR NAME \_\_\_\_\_



POST-INSTRUCTIONAL EVALUATION FORM:

JUDGES INFORMATION AND INSTRUCTIONS

I. JUDGES INFORMATION: The Post-Instructional Evaluation is comprised of one dance number choreographed by the teacher from combinations of Jazz Fundamentals learned during the unit. The percussion accompaniment, unfamiliar music, and familiar music variables will be applied here. This test will be given on the last day of the unit.

II. JUDGES INSTRUCTIONS:

- A. Before reviewing the groups for judging, please review the following definitions:
1. grace - beauty of movement
  2. co-ordination and balance - control of mind over muscle;  
smoothness of movement
  3. composition - interpretation and execution of movement  
from teacher demonstration
  4. rhythmic response - ability to execute movement smoothly  
in time to music
  5. dynamics - manner of physical forcefulness in dance movements
  6. facial expression - looks that express or show feeling
  7. unsatisfactory - inadequate or insufficient quality
  8. poor - not good in quality
  9. satisfactory - adequate or sufficient quality
  10. good - having desirable qualities
  11. excellent - extremely favorable quality
- B. Judges please place the number on the rating form which shows where you feel each individual's performance falls in the areas indicated. Please note specific explanations of ratings found at the bottom of the rating form.
- C. When rating rhythmic response, also place the letter a or b after the rating 1, 2, or 3 to indicate: 1a. -- too slow, 1b. -- too fast; 2a. -- slow, 2b. -- fast; 3a. -- slightly slow, 3b. -- slightly fast.

POST-INSTRUCTIONAL RATING FORM

GROUP: \_\_\_\_\_

SUBJECT NUMBERS	GRACE	CO-ORDINATION & BALANCE	COMPOSITION	RHYTHMIC	FACIAL EXPRESSION	DYNAMICS
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Rating Scale: 5=excellent; 4=good; 3=satisfactory; 2=poor; 1=unsatisfactory  
 YOUR NAME \_\_\_\_\_

## APPENDIX B

TABLE 10

APPLICATION OF KRUSKAL-WALLIS ANALYSIS  
OF VARIANCE BY RANKS

K = No. of Subjects  
 nj = No. of cases in  
 jth Sample

$N = \sum nj$ ; No. of cases in  
 all Samples combined

Rj = Sum of Ranks in jth  
 Sample Column

$\sum_{j=1}^K$  directs sum over  
 the K Samples  
 Columns

Correction of Ties  
 t = No. of observed ties

$T = t^3 - t$  = formula to  
 find how many groups  
 of ties occurred and  
 how many scores were  
 tied in each group.

t	3	2	3	2
T	24	6	24	6

Formula for Total Tie  
 Correction

$$1 - \frac{\sum T}{N^3 - N} = 1 - \frac{60}{63^3 - 63}$$

$$= 1 - \frac{60}{250047} = 1 - \frac{60}{249984}$$

$$= .99976$$

$$\begin{aligned}
 H &= \frac{12}{N(N+1)} \sum_{j=1}^K \frac{R_j^2}{n_j} - 3(N+1) \\
 &= \frac{12}{63(63+1)} \left[ \frac{(458.5)^2}{19} + \frac{(808.0)^2}{23} + \frac{(749.5)^2}{21} \right] - 192 \\
 &= \frac{12}{4032} \left[ \frac{21022.25}{19} + \frac{652864}{23} + \frac{561750.25}{21} \right] - 192 \\
 &= \frac{12}{4032} [11064.33 + 28385.39 + 26750.01] - 192 \\
 &= .0029761 (66199.73) - 192 \\
 &= 197.01701 - 192
 \end{aligned}$$

$$H = 5.01701$$

H Computed for Corrected Ties

$$H = \frac{12}{N(N+1)} \sum_{j=1}^K \frac{R_j^2}{n_j} - 3(N+1)$$

$$1 - \frac{\sum T}{N^3 - N}$$

$$H = \frac{5.01701}{.99976} = 5.01821$$

A. Probability under  $H_0$  that  $X^2 \geq$  chi square

B. .10 Risk

C. Obtained H = 5.01821

D. Chart = 4.60

d.f. = 2

N = 63