

STUDY OF TEN MAJOR STUDENTS IN THE DEPARTMENT OF HEALTH,
PHYSICAL EDUCATION, AND RECREATION WITH REFERENCE TO
DIFFICULTIES EXPERIENCED IN LEARNING TAP DANCE
AND SUGGESTED DEVICES FOR OVERCOMING
THE DIFFICULTIES

A THESIS

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CHAPTER I

ORIENTATION TO THE STUDY

Justification of Tap Dance in Education

Less than two decades ago, Abraham Flexner, a champion of the solid subjects of mathematics, Greek, and Latin, was grieved greatly because tap dancing was offered in one of the larger universities. He deplored the depths to which American education had fallen by expanding educational opportunity and attendance, and making way for "the activities which are characteristic of the expansive physical and emotional sides of adolescence."¹ Flexner not only believed in the retention of the solid subjects in the curriculum, but he also believed that education should be limited to training the intellectual capacity of the mind, for he states: "To my thinking, for us Americans, education ought at this moment to emphasize scholarship and the capacity for severe intellectual effort, for nothing else needs emphasizing."² He further believed that a scholar should rule out worldliness, and that the mind should be trained and disciplined by the classics.

¹ Abraham Flexner, Do Americans Really Value Education? (Cambridge: Harvard University Press, 1927), p. 7.

² Ibid., p. 10.

In the 1920's, the same decade that Flexner was pointing out the value of discipline of the classics, Ellis wrote that "To learn to dance is the most austere of disciplines. . . ."1

In an article, "Who is Liberally Educated?" by Duggan,² published in 1940, the author re-emphasizes the erroneous assumption of formal discipline of the mind as pointed out by earlier psychologists. The mind is not made up of general faculties; such as judgment, memory, et cetera, which can be trained through pursuing solid subjects to function in all situations. The ability to solve a mathematical problem does not transfer automatically the facility to judge the breaking distances of various speeds when one is driving an automobile.

Ultimately in the evolution of modern educational philosophy, the concept of unity or totality of the individual superseded the concept of the separateness of mind and body. Education came to agree that the function of education is the all-round development of the total organism.

Good education is concerned with skills in developing an adequate personality, free from mental and social

¹Havelock Ellis, The Dance of Life (Boston: Houghton Mifflin Co., 1923), p. 277.

²Anne Schley Duggan, "Who is Liberally Educated?" The Journal of Health and Physical Education, October, 1940, p. 461.

inhibitions, with skills in recreational activities which are wholesome and enjoyable, and which aid in building creative and artistic individuals.

Good education, as Williams has so aptly stated, should be:

Whatsoever gives youth freedom in movement, smoothing away the stiffness, awkwardness, and jerks that so readily come from the inhibitions set upon the mind is good education.

Whatsoever gives youth skills with which dramatic and festival experiences may be stimulated and indulged is good education.

Whatsoever gives youth the notion that life is more than money, more than food, more than maximum production to the square mile is good education.

Whatsoever gives youth the idea that wholesome play in game, dance or other form is a legitimate, indeed, an imperative part of fine living is good education.¹

What better reasons, then, could we have for justifying dance in education? For, as Ellis says, "The art of dancing stands at the source of all the arts that express themselves first in the human person. Dancing is the loftiest, the most moving, the most beautiful of the arts, because it is no mere translation or abstraction from life; it is life itself."²

¹Anne Schley Duggan, Tap Dances (New York: A. S. Barnes and Co., 1932), Introduction, p. xii.

²Ellis, op. cit., p. 36.

History of Tap Dancing

Tap dancing had its origin in the step-dances of many countries. Its exponents have always been of the common people, and they have drawn heavily from the stock of folk dance traditions which the common folk of so many nations brought with them to this country. Now, it is considered typically an American form because it is a mixture of the talents of all foreign elements.

It is fruitless to search among the dance histories for early mention of "tap dancing" because the allusions to this type were in the terms "jig," "clog," and "step-dances." Kinney states, "All the Latin countries, no less than Scotland and Ireland, have their jig. In Italy as elsewhere, it is a combination of rapid clog and shuffle steps."¹

Duggan writes:

The term "clogging" arose through the use of stiff, wooden shoes or "clogs" which were a characteristic accessory of the early Irish peasant costume. They appeared in their professional capacity when Irishmen, who were among our first professional tap dancers, wore them for the execution of their tap rhythms.²

The "step-dances" of England were among the first to be introduced professionally in America with the per-

¹Margaret Kinney and Troy Kinney, The Dance (New York: Tudor Publishing Co., 1935), p. 162.

²Duggan, op. cit., Foreword, p. viii.

formance of the Lancashire Clog. Irish folk dancers exhibit an amazing likeness to the present terms used in tap dancing. "Brush," "toe click," "point," and "stamp" are examples of this similarity.

The development of the tap dancing movement on the stage is linked with the following personalities: Tom Rice, Edward P. Christy, Tom Patricola, and Johnny Boyle, Sr., who have contributed their talents to the furtherance of its popularity.

The school population of America consists of children whose ancestry is derived from the common folk of many countires. These peoples brought many folk dance steps to America which have through the past half century been welded into an American form of tap dance. Educational leaders such as Hinman,¹ Frost,² and Knighton³ recognized the values of tap dancing in the social life of the common folk and introduced it into the teacher training program of this country.

Since tap dance, as well as all types of dancing, is a recognized activity in the physical education program,

¹Mary Wood Hinman, Clogs and Jigs, Vol. V. (New York: A. S. Barnes and Co., 1924-1927).

²Helen Frost, The Clog Dance Book (New York: A. S. Barnes and Co., 1928).

³Marjorie Hillas and Marion Knighton, Athletic Dances and Simple Clogs (New York: A. S. Barnes and Co., 1928).

it is necessary for the physical education instructor to be skilled in dance activities as well as in sports and aquatics.

After observing the difficulty with which some physical education majors acquired skill in tap dancing, even though they were skilled in such motor activities as swimming, basketball, hockey, tennis, et cetera; the investigator became interested in determining causal factors of the difficulties, and in developing devices for overcoming them.

Values of Tap Dance

Since tap dancing is becoming so important, it will be well to mention the values which accrue from the activity.

From the following list of values, one can readily understand why tap dancing has become so firmly established in the physical education programs of our schools and colleges.

Unlike many activities, tap dancing has the advantage of requiring practically no special equipment. Comfortable shoes with leather soles are very satisfactory; also tennis shoes with metal discs that are made to be used on the bottom of chair legs to prevent scarring the floor have proved practical. Very limited floor space is sufficient for the activity.

Piano or phonograph is the preferable type of accompaniment, but fun in tap dance may also be had if the members of the group will accompany one another by singing, whistling, or clapping the hands.

In McCristal's study of the pace factor in learning motor skills associated with tap dancing, the data tend to indicate that gymnastics and tap dancing favor the increase of the fundamental foot rhythms of students enrolled in these courses. His data also suggest that pacing or timing in the fundamental foot rhythms becomes more accurate if simple rhythmic patterns rather than complicated rhythms are used.¹

Tap dance is not a "sissy" activity, because its value has been proved in athletic training. An example of this is the study of tap dance by Knute Rockne's football boys for the purpose of gaining a sense of rhythm, improving foot work, and acquiring a feeling of unity. Boxers and players of basketball and tennis also study tap dancing.

Tap dance is an activity which may be participated in by both sexes of all ages. It meets the criteria for

¹K. J. McCristal, "Experimental Study of Rhythm in Gymnastic and Tap Dancing," Research Quarterly of the American Physical Education Association, May, 1933, p. 63.

co-educational activities because it may be participated in by individuals, couples, or any number of persons in a group without bodily contact. It requires skill and agility rather than strength and endurance.

Active, enthusiastic, and relaxed participation in the activity brings forth the physiological value of good exercise.

Tap dance affords an excellent opportunity for self-expression through the character and dramatic elements of all types of tap dance, especially the eccentric dance.

There are unlimited creative possibilities in tap dance, not only for the advanced dancer, but also for the beginner. Even though the beginner has learned only a minimum of fundamental steps, she may be able to develop a short dance to the rhythmic pattern of a nursery rhyme, proverb, name pattern, or a seasonal song. Ostlund and Schlottmann have written a very enlightening article on this subject titled, "Fun in the Tap Class".¹

Tap dance affords an excellent opportunity for rhythmic training inasmuch as it appeals to the sense of hearing as well as to the sense of seeing. The various types of tap dances encompass such meters as 2/4, 3/4, 4/4, and 6/8, which may be even, uneven, or syncopated.

¹Elizabeth Ostlund and Jeanette Schlottmann, "Fun in the Tap Class," Educational Dance, March, 1940, pp. 6-8.

Many invaluable opportunities occur in tap dance classes in which the students may be educated in the choice of good music.

There are inestimable recreational and social possibilities for the spectator and for the participant in the activity. Participation in tap dance as recreation is not necessarily limited to motor activity, as it may have even more appeal to those who enjoy watching the activity.

The popularity of tap dance on the stage, screen, and radio may be taken as further proof of its recreational value.

There is a feeling of real accomplishment when an individual can perform a tap dance well. Unlike folk, modern, and ballroom dance, which are taught in education, tap dance is more specific and there is a definiteness about it not found in the other types. Each step has to be learned and memorized in order of sequence for the routine. Time relationships are so important and noticeable in tap dance that an individual can recognize immediately whether or not she is successful in learning the steps and routines. In other words, an individual has accomplished more after learning a tap dance than a folk dance.

Tap dancing is an invaluable activity for all ages for emotional release. It is believed that even as low as the fifth grade in elementary school, tap dancing may be

an asset in discipline and a safe method of relaxation not too strenuous, but designed to relieve much tension accumulated through the average physical restraint of a growing child.

Tap Dance in Wartime

The writer has discussed the "values of tap dancing" at length, but with our country at war, a whole new set of values has developed of necessity. Because some of these values will diminish or vanish with the termination of the war, it is important to list war values separately from those already given.

During the present emergency of World War II, equipment for many activities is unobtainable; and activities must be discontinued or maintained on a much smaller scale. As brought forth in the discussion of the values of tap dance, the activity requires very little space and a special costume is not needed for participation.

The schools are being called upon by the armed forces to provide entertainment for the boys in camps, hospitals, and United Service Organizations. Tap dance has proved to be one of the most popular and ideal forms of entertainment. Not one, but several routines and special solo numbers are requested for each entertainment.

More and more women physical education teachers are having to assume the responsibility of the boys' phy-

sical education program in conjunction with the girls' program. Therefore, the teacher is having to divide her time between the two groups or combine the two groups in wholesome and enjoyable co-educational activities.

Boys, as much as girls, enjoy rhythmic activities if suitable material is offered. There are six excellent types of tap dance, namely; waltz, buck and wing, soft shoe, military, and rhythm buck. The military and eccentric dances especially appeal to boys.

Purposes of the Study

The purpose of this study is three-fold: to determine specific factors related to the difficulties of each of ten students majoring in Health, Physical Education, and Recreation at the Texas State College for Women, who, for different reasons, have not been able to acquire skill in tap dancing; to devise a remedial program for these students, whose deficiencies may be encountered by other individuals; and to discover methods of teaching students who are definitely slow in learning tap dance.

Limitations of the Study

The investigator desires to point out three limitations to the present study.

First, the study is confined to the study of ten students majoring in Health, Physical Education, and Recre-

ation at the Texas State College for Women.

Second, the study is limited as to the length of the experimental period. The study was conducted for one semester, or four and one-half months during the second semester of 1943-1944. The students attended the clinic which met twice each week for a period of forty-five minutes.

Third, the study was approached on the basis of three factors manifested in the subjects; namely, lack of rhythmic ability, inability to relax, and personality problems.

Survey of Previous Studies

As far as the investigator has been able to find, there are no previous studies directed toward the purposes as set forth in this study. The study which bears the most similarity to the present one, and is possibly the most extensive study relating directly to tap dancing, was conducted by Triplett.¹ The testing devices used were: an original rating scale for grading skill of beginning tap dancers, an original test of the knowledge of tap fundamentals, the Johnson Physical Skill Test, the Otis

¹Evelyn Triplett, "Study of 150 College Women Enrolled in Beginning Tap Dancing Classes with Reference to Certain Factors Related to This Skill," Unpublished Master's Thesis, Graduate Division, Department of Health and Physical Education, Texas State College for Women, 1939.

Intelligence Test, and the Seashore Rhythm Test. Her subjects were 150 college women in beginning tap classes.

She concludes from the coefficient correlation (.972) found between rhythm, as measured by the time and rhythm divisions of the Seashore Rhythm Test, and skill in performance, as measured by the original rating scale, that she is justified in saying that ability to perform well in dancing is definitely related to ability in rhythm.

Triplett's rating scale consisted of five fundamental tap steps, the creation and execution of an original step, and the performance of a memorized tap routine which she states is a fairly accurate measure of skill of students at the close of one semester of tap dancing. The Triplett rating scale could not be used in this study to determine skill in performing tap as the girls were unable to execute the elements to be rated or create dance steps which had already been judged by an expert on their final examination given in a previous class.

Triplett states that the Seashore Rhythm Test is a reliable measure of rhythm for students in tap dancing. This finding is based on the correlation coefficient of .972 between scores on the Seashore Rhythm Test and scores of skill of successful dancers as evidenced by their ability to perform the items rated by the original rating scale, devised by Triplett, at the close of one semester

of tap dancing. This eliminates the use of Seashore's Rhythm Test as a reliable measure of the dancing ability of the girls in this study, as they are unable to tap or create dance steps.

Triplett's findings show that the Otis Intelligence Test is not predictive of ability, knowledge, or skill of students of tap dancing. The inclusion of intelligence scores in this study is for the purpose of comparing individual intelligence scores with norms established for college women, and not for the purpose of predicting tap skills.

Annett¹ reports a study of rhythmic capacity and performance in motor rhythm of 122 freshman physical education majors. The Seashore Rhythm Test and an original motor rhythm test were administered. The motor rhythm test was given three times to increase its reliability. The average of the three scores on each test was used as the final score for each subject. Like Triplett's study, Annett's study indicates the value of the Seashore Rhythm Test in predicting ability in motor rhythm.

A questionnaire regarding experience in dancing was also submitted to each subject. Annett concludes from the findings on the experience questionnaire that the ear-

¹Thomas Annett, "A Study of Rhythmical Capacity and Performance in Motor Rhythm in Physical Education Majors," Research Quarterly of the American Physical Education Association, May, 1932, pp. 183-191.

lier the child begins activities related to motor rhythm, the more skillful he will become as a dancer; an increased frequency of dancing accompanies increased skill in dancing; interest in dancing, especially at an early age, goes hand in hand with skill in dancing; the public school has not offered adequate opportunities for developing capacity in motor rhythm; and the more expert dancers report a higher degree of pleasure in dancing than do the less skillful dancers.

A check list¹ regarding rhythmic experience, similar to the questionnaire used in Annett's study, was used in the present study for the purpose of determining the rhythmic training of each subject. The findings in the present study are used as a device for diagnosing rather than for comparison of degrees of training with degrees of skill within a group.

McCristal² used gymnastic and tap dancing classes to study the development of the pace factor in motor skills. His subjects were twenty-four students enrolled in a gymnastic and tap dancing class and an athletic coaching class in calisthenics. Each subject filled out a questionnaire concerning the length of time he had practiced activities

¹Appendix, p. 93.

²McCristal, op. cit.

of a rhythmical nature. He used an electrical device in recording the motor response by the tapping of the feet on an elaborate set of brass plates. The records show that gymnastic and tap dancing favor the increase of fundamental foot movements of students. McCristal concludes that rhythm is not an innate faculty, since those subjects having the most previous training in rhythmical activities made the highest scores. He further concludes that the speed with which rhythm may be learned depends upon the intensity, length of practice periods, and the nature of the movements practiced. His data also suggest that dances incorporating simple rhythms increase fundamental foot rhythm more rapidly than do dances involving complicated rhythms.

The contribution of the McCristal study would seem to coincide with the purposes set up for the present study, in that the subjects in this study could be helped by more training done under conditions which reduce tension, with particular attention on pace factors at opportune times as found necessary for each student.

Buck reports a study of a comparison of two methods of testing response to auditory rhythms, developed from results obtained in a previous study of an auditory rhythm test given to major students in the Department of Physical Education for Women at Wisconsin University. Subjects in Buck's study are four dance classes which were given a

written test of eighteen rhythmic patterns based on underlying beats of two, three, and four, and a tapping test composed of one-half of the written rhythm test. A coefficient of correlation of a .58 between the tap response with the written test shows that while there are common elements in the two tests, the measurement of different factors are involved.

The written test involves more factors than does a test calling for the tapping response, making it about six times more difficult than the tapping test. Buck concludes that the written test could be used as a device for the training of rhythmic perception.¹

Summary of Survey of Previous Studies

The investigator made a survey of previous studies related to the present undertaking. These studies were concerned with unselected groups in regard to skills, while the present study is limited to a special group of students who were unable to do satisfactory work in tap dancing. The studies were concerned with possible correlation between intelligence, rhythm, motor ability, skill of performance, and knowledge or information related to tap danc-

¹Nadine Buck, "A Comparison of Two Methods of Testing Response to Auditory Rhythms," Research Quarterly of the American Physical Education Association, October, 1936, pp. 36-45.

ing, and pace factor in motor skills of college students.

The present study is concerned with college women who could not do satisfactory work at the end of one semester in tap dancing. Tests used in this study, similar to those used in reports of previous studies, are used for the purposes of diagnosis rather than the purposes of prediction of rhythmic ability or for correlation between intelligence and rhythm or other types of comparison.

CHAPTER II

SELECTION AND DESCRIPTION OF DIAGNOSTIC INSTRUMENTS

In this study, the selection of tests and the construction of check lists were chosen to aid in diagnosing difficulties and introducing remedial measures for the individual rather than for comparative purposes between groups, or prediction of skill. This is a case study of individual differences of ten students with reference to certain educational, physical, and psychological factors associated with the learning of tap dancing.

To reiterate, this study purports to determine the specific factors related to the difficulties of each of ten students who have not been able to acquire skill in tap dancing; to develop devices for overcoming their difficulties; and finally, to suggest methods of approach in teaching students who are slow in learning tap dance.

The following factors are selected to aid in studying and diagnosing the inability of ten students to achieve proficiency in tap dance:

1. Intelligence
2. Personality adjustment
3. Rhythmic ability
4. Rhythmic experience
5. "Felt-Difficulties"
6. Relaxation

Intelligence

The measurement of intelligence is now firmly entrenched in education. There has been a tremendous amount of research, study, investigation, and experiment done in the field of intelligence tests.

At the present time the chief problem in the development of mental tests is the need of a more precise definition of the abilities or traits measured.¹

Boynton summarized experts' definitions of intelligence as follows, "Thus, the intelligent individual can think abstractly at times at least, can learn, has a capacity of acquiring and adjusting and adapting, and uses judgment and common sense; and without doubt, all of this is dependent upon a biological mechanism."²

Freeman defines mental tests as instruments for the measurement of individual abilities or types of behavior, with maximum emphasis on differences due to original nature rather than to training and environment.³

Otis states that "mental ability is an innate mental quality which increases with age, and may be measured

¹Frank N. Freeman, Mental Tests (Dallas: Houghton Mifflin Co., 1939), p. 16.

²Paul L Boynton, Intelligence, Its Manifestations and Measurement (New York: D. Appleton and Co., 1933), p. 9.

³Freeman, op cit., pp. 21-22.

by the individual's score in the test."¹

In this study the mental ability scores of the ten girls are to be compared with norms established for high school and college students for the purpose of determining mental ability as defined by Otis.

The Otis Self-Administering Test, Higher Examination, Form D was chosen as the instrument with which to measure intelligence.

The reliability of the test was determined by means of correlation between different forms of the same test. The coefficient of correlation found between the two forms of the Higher Examination was .921.

The validity of the test was determined by a coefficient of correlation of .889 between the Higher Examination and the Advanced Examination taken two years earlier for 180 cases, and the average of four coefficients of correlation of .842 between the Higher and Intermediate Examinations, averaging about 100 cases in each group.

Objectivity was established by making the test self-administering and establishing scoring keys which are clearly and easily understood.

The time limit for taking the test is twenty minutes, which meets the requirement of economy of students'

¹Arthur Otis, Otis Self-Administering Tests of Mental Ability, Manual of Directions and Key (New York: World Book Company, 1928), p. 2.

and experimenter's time.

It is a standardized test for college women whereby comparison of individual scores with norms may be made.

In addition to the above criteria, the Otis Self-Administering Test is the newest form of the higher examination; therefore, more novel items are included.

It had been administered to the students in the Department of Health, Physical Education, and Recreation and the data were made available to the investigator.

Personality

Personality does not depend upon a few characteristics, but upon the interaction of most of the traits of an individual. There are about as many definitions of personality as there are psychologists.

Shaffer states, "The personality of an individual may be defined as his persistent tendencies to make certain kinds and qualities of adjustment."¹

Allport explains, "With the exception of a few traits, personality may be defined as the individual's characteristic reactions to social stimuli, and the quality of his adaptation to the social features of his environment."²

¹Laurance F. Shaffer, The Psychology of Adjustment (New York: Houghton Mifflin Co., 1936), p. 282.

²Floyd Henry Allport, Social Psychology (New York: Houghton Mifflin Co., 1924), p. 101.

An individual's personality would seem to have a decided effect on her ability to tap dance because:

(1) Tap dancing, as taught in the schools today, is usually learned in a group. The social adjustment of the individual is a determining factor in the individual's ability to cooperate with, or enter into, the activities of the group.

(2) Conditions of nervousness, including highly emotional states, have been found to involve muscular coordination. Since tap dance requires complex motor coordination of small muscles, it will be well to know the emotional adjustment of these ten students.

(3) Confidence is essential for individual success, and because these ten students were not successful in learning tap dance, it was necessary to determine whether or not they possessed this trait.

(4) The formation of lifelong attitudes, habits, and behavior patterns is influenced by an individual's home and health.

Since the concept of personality is difficult to treat with precision, due to the many traits involved, the investigator felt that it was necessary to select two inventories concerning personality in order to obtain a broader picture of each student's personality.

Bell Adjustment Inventory

The Adjustment Inventory provides four separate measures of personal and social adjustment: home adjustment, health adjustment, social adjustment, and emotional adjustment, which permit location of specific adjustment difficulties. It consists of 140 questions to be answered by encircling "yes," "no," or "?."

The validity of the Adjustment Inventory, as reported by Bell, was established in several ways. Not all of the methods for establishing validity are given in this study. The following three methods were chosen for review.

The items used in the four sections were selected on the basis of "goodness" of statement in differentiating between the upper and lower fifteen per cent of the individual scores arranged in a distribution. The results of the various sections of the Inventory were rechecked at a later date by interviews. After correction the coefficients of validity ranged between .81 and .93, coefficients were reported for the social adjustment section, the emotional adjustment, and .94 for the total score of the Inventory. The coefficients are reported in Table I as given by Bell.¹

¹Hugh M. Bell, Manual for the Adjustment Inventory (Stanford University: Stanford University Press, 1934), p. 3.

TABLE I
COEFFICIENTS OF VALIDITY

| | |
|--|-----|
| Allport and Social Adjustment. | .81 |
| Thurstone Schedule and Emotional | .93 |
| Thurstone Schedule and Total Score | .94 |
| Bernreuter B4-D and Social | .90 |

McCall states that there seems to be a sort of rough agreement among workers that an r of $\pm .7$ to ± 1.0 is a high correlation.¹

The reliability for the four sections of the Inventory and for its total score were determined by correlating the odd-even items and applying the Spearman-Brown prophecy formula. The coefficients of reliability are given in Table II.

TABLE II
COEFFICIENTS OF RELIABILITY

| | |
|--------------------------------|-----|
| Home Adjustment. | .89 |
| Health Adjustment. | .80 |
| Social Adjustment. | .89 |
| Emotional Adjustment | .85 |
| Total Score. | .93 |

The test was standardized and norms are given for both sexes including high school and college students. These evidences of validity and reliability established for the Bell Adjustment Inventory justify the use of this scale in the present study.

¹William A. McCall, Measurement (New York: The Macmillan Co., 1939), p. 63.

Objectivity was established by making the test self-administering and establishing scoring keys which are clearly and easily understood.

Bernreuter Personality Inventory

The Bernreuter Personality Inventory consists of 125 questions to which the individual may indicate her agreement, disagreement, or doubtfulness in answering each of the items by encircling "yes," "no," or "?." Bernreuter designated the measures of six traits of the individual as: (1) B1-N, neurotic tendency; (2) B2-S, self-sufficiency; (3) B3-I, introversion; (4) B4-D, dominance-submission; (5) F1-C, confidence; (6) F2-S, sociability. Six scoring keys are used with differentiating weights assigned to each possible response for each item.

The coefficients of reliability for each scale were computed by using the split-half method and applying the Spearman-Brown prophecy formula. The coefficients of reliability are given in Table III.

TABLE III

COEFFICIENTS OF RELIABILITY

| | |
|---------------|-----|
| B1-N. | .88 |
| B2-S. | .85 |
| B3-I. | .85 |
| B4-D. | .88 |
| F1-C. | .86 |
| F2-S. | .79 |

To establish validity for the "B" traits, correlation between each of the four traits and a similar previously validated test was found. The coefficients of correlation were corrected for attenuation. The results are given below in Table IV.

TABLE IV

COEFFICIENTS OF VALIDITY

| | |
|----------------------|------|
| B1-N and TN. | .99 |
| B2-S and SS. | 1.00 |
| B3-I and C2. | .92 |
| B4-D and AS. | .99 |

These evidences of validity and reliability established for the Bernreuter Personality Inventory justify the use of this scale in the present study.¹

Rhythm

Rhythm is a fundamental and characterizing element of tap dance. According to Hungerford, "Time relationships are what makes this kind of dancing especially interesting."²

Rhythmic ability, as one important element of dance, partially determines an individual's skill in tap dance and the ability to teach the activity. Because of the increased emphasis upon dance, and since it is one phase of an all-

¹Robert G. Bernreuter, Manual for the Personality Inventory (Stanford University: Stanford University Press, 1935), p. 1.

²Mary Jane Hungerford, Creative Tap Dancing (New York: Prentice-Hall, Inc., 1939), p. 21.

round physical education program, these ten students as potential dance teachers should be able to perceive rhythm, or the lack of it, in others.

Various abilities such as intellectual, motor, and rhythmic ability may be developed; but they are considered to have an organic basis which implies innate capacity.

H'Doubler says,

To explain the existence of rhythm and to understand it we must go to the laws of our own being and discover that rhythmic experiencing is a capacity of the human organism. Rhythm is an attribute of man's nature. His physiological and psychological as well as his physical functioning obey the laws of rhythm, and out of this involuntary obedience has come the highly conscious appreciation of form.¹

With respect to rhythm, the ability to perceive or understand rhythm is considered basic to rhythmic response. The measurement of the individual's ability to perceive rhythm, and her development with respect to this trait is used as an index to the individual's rhythmic ability.

Rhythmic perception is defined by some authorities as the ability to recognize rhythms; by others, as the ability to understand rhythm. For the purpose of this study

¹Margaret N. H'Doubler, Rhythmic Form and Analysis (Wisconsin: J. M. Rider, 1932), p. 1.

rhythmic perception is defined as the ability to receive and recognize the sensation of rhythm and the ability to record this perception graphically, because it is considered a factor which influences the individual's rhythmic ability and, in turn, her skill in tap dance.

The literature reveals many attempts to measure rhythmic ability, but according to McCloy there are no really satisfactory tests of rhythm which are both objective and sufficiently easy to administer to be practicable.¹

The literature also reveals many attempts to measure motor ability, but the tests are not economical of time or are too subjective to meet the needs of this study. Other tests require complicated and expensive apparatus.

Haight states,

In such attempts as have been made to formulate tests for the sense of rhythm, there have been two outstanding weaknesses: (1) the difficulty of differentiating between failure to sense the rhythm and failure to coordinate well enough to express the rhythm felt; and (2) as in the Seashore tests, the difficulty of differentiating between failure to sense the rhythm and failure to retain in memory the rhythm

¹Charles Harold McCloy, Tests and Measurements in Health and Physical Education (2nd ed.; New York: F. S. Crofts and Co., 1942), p. 152.

pattern during the interval until judgment may be given.¹

In constructing the original Rhythmic Ability Test, the writer attempted to eliminate the weaknesses of other tests mentioned by Haight.

Rhythmic Ability Test

The one hundred rhythmic patterns making up the rhythmic test² used in the present study were devised after a study of tests with similar items constructed by Ostlund³ and from tests used by Duggan⁴ in teaching, and from an analysis of the kinds of patterns that should be known according to Thompson⁵ and Hungerford.⁶

The patterns developed for the rhythmic test were divided into four parts.

¹Edith C. Haight, "Individual Differences in Motor Adaptations to Rhythmic Stimuli," The Research Quarterly of the American Association for Health, Physical Education, and Recreation, March, 1944, p. 38.

²Appendix, p. 87.

³Elizabeth Gordon Ostlund, "A Study of the Development of General Information, Motor Ability, and Rhythmic Ability by Major Students in Health and Physical Education at Texas State College for Women," Unpublished Master's Thesis, Graduate Division, Department of Health and Physical Education, Texas State College for Women, 1941.

⁴Anne Schley Duggan, Examinations, 1943.

⁵Betty Lynd Thompson, Fundamentals of Rhythm and Dance (New York: A. S. Barnes and Co., 1933).

⁶Hungerford, op. cit.

Part I is a measure of information on musical meters. It consists of ten measures of 4/4 meter, five measures of 3/4 meter, five measures of 2/4 meter and five measures of 6/8 meter; making a total of twenty-five patterns. Part I is objective in that it is self-administering and is scored by a key. A score of one point is given for each correct answer (one measure), making a total of twenty-five points.

Part II is a measure of rhythmic perception. Twenty-five patterns were tapped on a wood-block. The patterns were the same as for Part I, but were arranged in a different sequence. Part II was administered according to the following procedures:

1. The number of the pattern was stated.
2. The primary beats of the meter were tapped on the wood-block to establish the tempo.
3. The rhythmic pattern (one measure) was tapped on the wood-block.
4. The procedure was repeated once.

The students recorded the rhythmic pattern which they heard, by underlining each count on which a beat occurred. Example:

| | | | | | |
|---------------|-----|----------|---|----------|---|
| Primary beats | 4/4 | ♪ | ♪ | ♪ | ♪ |
| Pattern | 4/4 | ♪ | ♪ | ♪ | ♪ |
| Underline | | <u>1</u> | & | <u>2</u> | & |
| | | <u>3</u> | & | <u>4</u> | & |

Although the method of scoring Part II is objective, the administration of this part would not be considered objective unless the rhythmic patterns tapped on the wood-block were recorded.

Part III is a measure of motor response to visual stimuli made by clapping rhythmic patterns. Twenty-five rhythmic patterns were used.

This part of the test was objective in administration because the patterns were typewritten. However, the scoring of it would not be considered entirely objective, because of the failure of the judges to be consistent in perceiving the reproduction of rhythmic motor response in a performer. The unreliability of one individual in scoring another was reduced by using the average score of five judges.

The students were divided into two groups, making a total of five in each group. Number 1 in each group clapped the first five patterns of the 4/4 meter, while the other students graded her. Number 2 in each group clapped the second five patterns of the 4/4 meter. Number 3's performed the 3/4 meter; number 4's, the 2/4 meter; and, number 5's, the 6/8 meter. By this method each student performed five patterns for the first time without seeing them performed by someone else.

After each student had performed once, number 1 performed the set of patterns that number 2 had previously done; and the process continued until each student had clapped the twenty-five patterns.

Part IV was administered and scored in the same manner as Part III. The difference between Part III and Part IV is in the motor response of walking the patterns instead of clapping.

The total possible score for the test is 100 points.

The investigator of this study presents the following evidence of validity for the original Rhythmic Ability Test. The items were analyzed from five experts' teaching notes or publications of rhythmic patterns suggested for measuring rhythmic ability in the areas covered. The authors' patterns were simpler in construction and had a wider range of increasing difficulty.

The reliability of the test was not determined by the split-half method because of the divergence of elements tested in the four divisions, namely; information, perception, and the two methods of motor response. Another evidence of reliability is that the ten girls' scores increased between the first and second administration. Between these two tests, the girls had participated

in the clinic for one semester. The author of this study is cognizant of the fact that reliability is established by the readministration of the test without intervening study or instruction.

Check List of Rhythmic Experiences

A check list¹ regarding experiences in rhythmic activities was submitted to each student. The first part of the check list was concerned with music education and training. Data were obtained regarding the kinds of musical instruments studied; the length of time spent in studying, according to weeks, months, years, or semesters; the period in which it was learned, in relation to the educational levels of pre-school, elementary, high school, or college; and the source from which it was learned--schools, studios, or organizations.

Identical information was obtained concerning dance education.

Check List of "Felt-Difficulties"

The investigator developed twelve statements which might be recognized by the students as "felt-difficulties"² or reasons for their inability to tap dance. These statements were related to rhythm, relaxation, and personality.

¹Appendix, p. 93.

²Appendix, p. 84.

The students were asked to rank these statements in order of importance according to their ideas regarding their difficulty in attaining skill in tap dance. It was suggested that any additional reasons which the students considered to be the cause of their difficulties should be listed and ranked with the original statements.

This was important psychologically because the students felt that the class period was a workshop for the purpose of recognizing and readjusting difficulties.

Summary

The Otis Intelligence Test, Bell Adjustment Inventory, Bernreuter Personality Inventory, Check List of Rhythmic Experiences, Check List of "Felt-Difficulties", and the original Rhythmic Ability Test were administered at the beginning of the clinic. The Rhythmic Ability Test was readministered at the end of the experimental period.

The results of the single administration of the tests and check lists were used as diagnostic tools. The two administrations of the original Rhythmic Ability Test were used for purposes of diagnosing difficulties and measuring achievement.

CHAPTER III
PROCEDURES USED IN THE CLINIC

Introduction

Ten students, who were enrolled in the clinic during the second semester of 1943-1944, had just completed a beginning course in tap dance required of physical education majors. They had passed the information tests in the course, but their tap skills were so poor that the instructor of the course explained that it would be necessary for them to have another course in tap dance or special help before entering the required advanced course in tap dance. The investigator observed these students, participated with them in this beginning tap course, and became very interested in helping them.

The author of this study met with the girls and explained to them that she was willing to undertake a clinic for the purpose of discovering their difficulties in learning tap dance, and developing devices for increasing their skill. Good rapport was established between the investigator and the students. The students agreed to attend a clinic twice each week of the second semester of 1943-1944 during the regular college assembly hour.

Testing Procedures

Before the clinic work started, the Intelligence Test, the Bernreuter Personality Inventory, the Bell Adjustment Inventory, the original Rhythmic Ability Test, the Check List of Rhythmic Experiences, and the Check List of "Felt-Difficulties" described in Chapter II were administered to the students.

Techniques Used in the Clinic

In this chapter the factors relaxation, rhythm, and personality are discussed. Each factor is discussed separately, followed by the description of devices pertinent to its use in the clinic.

Relaxation

Relaxation, an essential element of tap dance, is necessary to obtain smooth, even rhythm and distinct tap sounds. Tenseness, the antithesis of relaxation, is reflected in the performance of tap dance by jerky, uneven movements or inability to perform at all.

The inability to relax is brought about because of neuromuscular hypertension. When a single muscle is stimulated, there is a period of contraction and a period of recovery. Therefore, a muscle must be stimulated and relaxed at certain intervals if the muscle is to function correctly and over a long period of time. "Tetanus," or

maintained contraction, will result if stimuli are produced before the end of the recovery or relaxation phase. Hypertension precedes the stage of exhaustion, and refusal to function is evidenced by an increase of tendon reflexes and an increase of mechanical muscle excitability.¹

The complete absence of all contractions in a muscle is known as relaxation, while the sensation experienced when a muscle contracts is called "tenseness".²

There are physical and psychological factors concerned in tenseness, but it is difficult to determine which cause is more fundamental.

The general physical causes which increase tenseness are: (1) ill health, (2) postures, and (3) periods of sustained effort, without breaks.

Rathbone points out that the psychological factors which seem to make adults most tense may be grouped under the major headings of insecurity leading to fears and worries, and compulsion leading to over-effort and hurry. They are manifested in everything the individual does.³

¹Josephine L. Rathbone, Corrective Physical Education (Philadelphia: W. B. Saunders Company, 1939), p. 124.

²Edmund Jacobson, You Must Relax (New York: McGraw-Hill Book Company, Inc., 1934), p. 61.

³Josephine L. Rathbone, Relaxation (New York: Bureau of Publications, Teachers College, Columbia University, 1943, p. 68.

A case illustrating the psychological factor of insecurity leading to fears and worries is to be observed in the student, who, on account of her inability to perform the tap steps successfully, became so tense that she held one arm very stiff at the elbow joint and flexed the wrist frequently, in small ineffectual movements while performing. This mannerism was controlled only after the student had comprehended the tap step, gained confidence in her ability to do the step, and practiced the step in a smooth, free, and easy rhythm.

Another case illustrates tension because of compulsion leading to over-effort. The student exerted such physical and mental effort that she not only clenched her fists while dancing, but she continued to dance after the music had ceased, entirely unconscious of the change of activity.

Jacobson claims that tensions can be classified as those involving: (1) competition in social, professional and educational worlds, (2) financial urges (3) taking examinations.¹ The first and third items are more directly concerned with the present case studies than with the second. Especially in physical education activity classes, there is a feeling of competition between

¹Jacobson, op. cit., p. 75.

individuals as well as groups. As a dance is being perfected, each individual strives to perform better than her fellow student. When group assignments are made for characterizing various dances or developing original routines, the spirit of competition is much greater; not only for individual achievement, but for group achievement.

Observation of individuals in the tap dance class showed the investigator that examinations caused some anxiety for even the most skilled students, and that greater anxiety was even more noticeable in the less skilled students. One of the students who was enrolled in the clinic would become so tense when taking an examination in a tap class that she would stop completely, even though she had performed the steps well before class.

Observation by the investigator and suggestions by the students disclosed that tenseness was also brought about through experiencing a new and unfamiliar activity. Many of the students were unfamiliar with rhythm, a very necessary element in tap dance. The students had received their concept of tap dance from the stage, screen, and radio. It meant a type of dance that was difficult, fast moving, and intricate.

Tenseness increased when the students, who were unfamiliar with the new activity, failed to grasp the

first few lessons, because of the many new elements to be learned at once. The verbal or written description of the movements, the motor response to the verbal or written stimuli, and the execution of the step in a specific rhythm to accompaniment proved difficult for these students.

Fear of performing before a class in which many students were skilled and therefore more critical, was one of the most outstanding causes of tenseness on the part of the unskilled students. It was an ordeal for the individual to perform an activity in which she knew that she had skill inferior to that of the competing members; thus, her anxiety concerning the grade to be received for the performance was an emotional strain.

Because of the nature of this study and the limited experimental period, the investigator was interested only in offsetting and releasing tenseness -- not testing to see why each student evidenced signs of tenseness, since "excess tension in muscles comes really from excess activity."¹ Therefore, relief from tenseness was improved by the expedient of relaxation at will by the cultivation of the muscle sense.

Many systems of relaxing exercises and techniques have been advocated by various authorities, but Edmund

¹Josephine L. Rathbone, Corrective Physical Education (Philadelphia: W. B. Saunders Co., 1939), p. 109.

Jacobson's¹ method was selected for the following reasons:

1. The technique required little time and space.
2. The technique requires no special equipment or accompaniment.
3. The technique requires no complicated routines.
4. The success of the technique depends upon the subject alone.
5. The technique demands determination and faith in oneself.
6. The technique can be subjected to scientific appraisal.

Preparation for relaxation. --Towels were rolled or folded into sizes suitable to be placed under knees, lower back, or head to relieve any felt tenseness or strain of these parts when lying flat on back. Mats covered with sheets were arranged on the floor. Belts and shoes were removed, and clothing was loosened to prevent binding of any parts of the body. Upon lying down, the students placed their arms several inches from the body directly on the mat. Legs were straight or slightly flexed at the knees. The eyes were closed.

Training in relaxation. --The process of relaxing the parts of the body is more easily learned when the

¹Jacobson, op. cit.

location of the various muscle groups is known. The students' knowledge of anatomy and kinesiology was very helpful in locating muscle groups for use in Jacobson's technique of progressive relaxation.

It was necessary to teach the students to recognize tenseness before relaxation could be taught.

The first step was to feel tenseness in the contracting of the biceps muscle by the simple act of arm bending. The second step was to feel stronger tenseness by adding resistance to the bending of the forearm. This was followed by letting the arm fall to the mat. It was explained that when the arm was bent, the individual was doing something, and as she relaxed she was not doing anything. The student would then ". . . . begin to realize that progressive relaxation is not subjectively a positive something; but simply a negative."¹

After practice in learning to recognize tension and the meaning of relaxing being "a negative," clenching of the fists was used to illustrate the difference between lying quietly and lying relaxed. First, the girls were asked to concentrate on the feelings in the muscles of their arms while lying quietly. Second, the girls were instructed to clench their fists and hold their

¹Jacobson, op. cit., p. 63.

elbow joints stiffly enough to avoid their bending. Again the process of progressive relaxation was used. The learning of the students was directed toward the sensing of the difference in the arm muscles when lying quietly and lying relaxed.

To insure further learning, the students were told to bend their arms and notice that effort was needed to perform the act, and when they ceased bending their arms they expended no effort. "Whatever it is that you do or do not do when you begin to relax, that you are to continue on and on, past the point where the part seems to you perfectly relaxed!"¹ This process was experienced by using the muscles to flex the hands, feet, legs, and eyelids.

After they had discussed and practiced the process of relaxation of the different parts of the body in class, the students were instructed to continue this practice for ten or fifteen minutes each day. They were checked during each class period as a reminder to continue their practice and to discover whether they needed help on the technique.

Relaxation Devices

Follow-the-Leader-Game.--The students formed a circle and relaxed the parts of the body as completely as

¹Jacobson, op. cit., p. 64.

possible. The student designated as the leader, passed slowly around the room with the other students following in "follow-the-leader" style. If the students remained relaxed, especially in the region of the ankles, clear distinct tap sounds for the slap resulted. The investigator then explained that they had experienced the fundamental movements -- a brush forward followed by a one, repeated first on one foot and then the other.

Values:

1. There is less tension and hypertension in moving activities than in those performed in a less stationary manner.
2. There is the element of fun present because of the game situation.
3. There is ample opportunity for success because the device is simple.
4. There is the absence of self-consciousness because of the game element.

Pendulum Swing of the Leg.--The students learn to relax through large, simple, swinging movements of the leg combining a brush with each swing. Directions and counts for the device are: (Begin with weight on left foot)

| | |
|---|---------|
| Brush right foot forward | Count 1 |
| Brush right foot back | 2 |
| Brush right foot forward | 3 |
| Brush right foot back, diagonally across in front of left foot | 4 |

| | |
|-------------------------------------|---|
| Brush right foot diagonally forward | 5 |
| Brush right foot back | 6 |
| Step left | 7 |
| Hold | 8 |
| Repeat on opposite foot. | |

All of the movements are large. The foot should be about 12 inches from the floor at the end of each brush.

Values:

1. Flexibility in the ankle joint is increased
2. Flexibility in the knee joint is increased
3. Outward rotation of the hip is increased

Slow and Easy.--Several tap steps were selected which varied in rhythmic pattern, floor pattern, and use of fundamental movements. The students performed each step in the correct rhythm in a tempo approximately three times slower than it should be done. All movements should be large.

Values:

1. Relaxation is increased by the smoothness and evenness of the rhythm of the step
2. Relaxation is increased through large movements

Rhythm

Rhythm is not only an element of dance, but of life itself. Rhythm, in some degree, is experienced by

almost everyone. Man's sociological and physiological functioning obey the laws of rhythm. There is rhythm in the beat of the heart and in breathing.

How, then, can rhythm be defined? Webster defined rhythm as: "1. The flow of cadences in written or spoken language. . . . 2. Music. Regularity or flow of movement which groups by recurrent heavy and light accent. . . . 3. Movement marked by regular recurrence of, or regular alternation in, features, elements, phenomena, etc.; hence, periodicity."¹

H'Doubler defines rhythm as "measured energy. It is action and rest--control and release."² She points out that an individual must be conscious of rhythm to sense it, and that an individual will be able to employ it consciously when she understands its elements and laws.

According to Jaques-Dalcroze, "consciousness of rhythm is the faculty of "placing" every succession and combination of fractions of time in all their gradations of rapidity and strength. This consciousness is acquired by means of muscular contractions and relaxations in every degree of strength and rapidity."¹

¹Webster's Collegiate Dictionary.

²Margaret N. H'Doubler, Rhythmic Form and Analysis (Wisconsin: J. M. Rider, 1932), p. 3.

Emile Jaques-Dalcroze, Rhythm, Music and Education (New York: G. P. Putnam's Sons, 1921), 79.

Since a dancer's steps must be synchronized with the rhythm and phrasing of the tune, these students should comprehend the elements of rhythm.

The rhythmic work in the clinic was begun by giving an explanation of such musical terms as: notes, rests, measures, tempo, time signatures, and rhythmic patterns.

To insure further learning, the instructor assigned each student to write twelve measures of 4/4 meter to be studied at the next class meeting. During the next class period, selected patterns were clapped and walked. The original rhythmic patterns were approved by the students, or suggestions for corrections were made.

The same procedure was followed for the 2/4, 3/4, and 6/8 meters. After the students thoroughly understood the values of the notes and rests, and knew that they must be exactly proportioned to one another so as to equal the value of the number of notes to the measure, the tap lessons were begun.

Rhythmic Devices

Rhythmic Patterns.--Each student developed three rhythmic patterns consisting of four measures each. The patterns were developed for 2/4, 3/4, 4/4, and 6/8 meter, making a total of forty-eight measures.

Values:

1. Learn to recognize notes and rests.
2. Learn the values of the notes and rests in relation to specific meters.
3. Learn to create rhythmic patterns.

Motor Response to Rhythmic Patterns.--Each student demonstrated her original patterns by walking and clapping them. Those who were successful assisted students who were not able to respond to their original patterns.

Values:

1. Learn to respond to rhythmic patterns by sight.
2. Gain confidence when helping others.

Write Note Values for Fundamental Steps.--After the fundamental steps had been presented in class and counted, the students wrote the note values for each step.

Values:

1. Present a graphic picture of the rhythm of the steps.
2. Learn to reproduce, by movements of the feet, the written symbols or counts.

Develop a Tap Step to an Original Rhythmic Pattern.--A step was built upon a rhythmic pattern of two measures. Tap elements were selected for the various note values. The step was executed to determine whether

or not it was logical. Although the step may be logical, it may not be an interesting step or rhythmic pattern; therefore, the student made the necessary adjustments and presented it to the class again.

Values:

1. Learn to develop and recognize interesting rhythmic patterns.
2. Learn to develop and recognize interesting step patterns.
3. Experience one approach for developing a tap routine.
4. Learn to create tap steps.

Convert Numerical Counts of Written Description of Dances into Musical Notes.--Various steps are selected from dances with which the students are not familiar. The numerical counts of the steps are converted into rhythmic patterns which are clapped and walked, after which the step pattern is learned. The following example is given:

| | | | | |
|---|---|---|---|---|
| 1 | & | 2 | &. | 3 |
|  |  |  |  |  |
| step, | brush, | brush, | step, | step |

Values:

1. A clearer, visual graphic picture of the rhythm of steps is established by converting numerical counts into note patterns.
2. The visual patterns are made more meaningful

by motor reproduction through walking and clapping.

Count Primary Beats to Phonograph Records.--The group listened to phonograph records, trying to get the feeling of the rhythm by silently counting primary beats. To check the accuracy of their silent counting, the investigator called upon the students at random to count the meter aloud. For those individuals who could not synchronize their counting with the primary beats of the music, added stimulation was given by introducing large muscular movements. An example of the movements used in this connection was swaying of the trunk combined with large arm-swinging motions.

Further stimulation was gained by the moving and counting of the group in unison. This increased the intensity of sound vibrations and visual stimulation.

Value: Learn to sense rhythm.

Personality Adjustment

The devices developed for overcoming personality difficulties are not so specific and direct as those developed for relaxation and rhythm, because of the many factors involved in personality. Emotional problems, lack of confidence, negative fears, feelings of inferiority, and timidity are among the personality difficulties

of these students that should be adjusted. The following devices are necessarily general, yet helpful.

Personality Adjustment Devices

Solicited Suggestions and Advice from the Students.--When a student was unable to grasp the meaning of something that had been explained, the less skilled students were urged to explain the meaning to others.

Values:

1. Gave the students more confidence in themselves.
2. Made the meaning of the item which they were explaining clearer to themselves.

Assisted or Conducted Class Work.--The students were given an opportunity to conduct part of a class period or to explain some item to the group.

Values:

1. Gave the students some responsibility which aided in overcoming their timidity
2. Gave the investigator another opportunity to observe the students' difficulties

Comparing Progress in Work.--A student's failure or success was never compared with that of another student, but only herself. Example: Wrong -- "Jane, you are improving all along. Keep trying and you will catch

up with Betty". Correct -- "Jane, you are improving each day".

Self-assurance Developed Through Realization of Capabilities.--The "Sophisticate,"¹ an advanced dance in 3/4 meter, was chosen for the students to learn. It was selected because of its even rhythm and because the students were familiar with the waltz step, although they were not familiar with this particular dance.

The investigator presented the first step by writing the rhythmic pattern of the step upon the blackboard, and having the students write the counts for the note values. After each student's work was checked for the correct answer, the group practiced clapping and walking the pattern. The investigator then wrote the description of the step under the rhythmic pattern, and the students learned the step individually.

Keeping in mind the fact that the students in the group were slow in learning tap dance, the investigator did not tell them that they were learning an advanced dance, because of the psychological effect it would have had on them. They would have felt defeat before they began to learn the step.

¹Anne Schley Duggan, Tap Dances for School and Recreation. (New York: A. S. Barnes & Co., 1935), p.32.

Each individual learned the step with very little difficulty. Next, the investigator asked the group if they considered the step as elementary or advanced. They considered it an elementary step. Their estimation of their ability to tap dance was greatly enhanced when they were informed that they had learned by themselves and with little or no trouble, a step from an advanced routine.

The second step of this same routine was learned by each student individually. They were instructed to learn this step directly from the book by following the procedure listed below:

1. Write the rhythmic pattern in note values from the counts given for the step.
2. Clap the pattern.
3. Walk the pattern.
4. Learn the step pattern slowly and in an even rhythm.

The same procedure was followed for the third step.

Methods for Teaching the Students Who Are Slow in Attaining Skill in Tap Dancing

In developing methods of procedures for teaching students who are slow in attaining tap skills, it is difficult to determine which of the elements necessary

for skill in the activity should be taught first.

Abbott¹ asked this question in an article titled, "Research in Tap Dancing": "Is the learning of fundamental steps, or the learning of a system of counting more valuable in producing motor rhythm or are the two interdependent?"

A similar question might be asked concerning relaxation and emotions in conjunction with personality adjustment. When tap dancing, does an individual become emotionally disturbed when she cannot learn a dance step because of tenseness, or does she become emotionally disturbed and then tense?

The investigator believes, however, that a knowledge of the elements of rhythm should precede the fundamental steps if the student has no concept of musical meters. This may be determined by Part I of the original Rhythmic Ability Test. If there is a lack of knowledge concerning these meters, the students should be taught from the beginning of the rhythmic section in this chapter on clinical procedures.

It is much easier to learn the elements of rhythm before learning dance steps, than attempting to learn a step and know nothing about rhythm until after

¹Elizabeth Abbott, "Research in Tap Dancing," Educational Dance, February, 1940, pp. 8-10.

several dances are learned, since rhythm is a necessary element of dance activities.

If the student does understand the musical notations of the various meters, the teacher may begin her instruction with the devices of clapping and walking the rhythmic patterns of the fundamental steps.

There are many things involved in learning tap dance, especially if an individual knows little or nothing about rhythm. The following things have to be kept in mind when learning a tap step:

1. Spoken or written description of the step
2. Motor response to the visual or auditory stimuli
3. Association of the rhythmic counts of the step with the motor response

The rhythmic devices have been placed in the order in which they should be used. The tap dance lessons should be begun with the device concerning the fundamental steps.

The relaxation and personality adjustment devices should be used at all times when teaching the students.

Summary

In this chapter procedures used in the clinic were discussed: (1) meaning, devices, and training in

relaxation in recumbent position; devices for securing relaxation in the standing position combined with large movements and movements through space that aid in flexibility of joints, necessary for clear and distinct tap sounds; (2) meaning of rhythm, rhythmic devices and values; (3) devices for personality adjustment and their values; and (4) general description of methods used in teaching the factors of relaxation and rhythm.

CHAPTER IV

CLINICAL FINDINGS AND CASE RECORDS

In general, the discussion of each case will be presented by the following outline:

1. The study of the case record data of each student was made in order to arrive at the implications of the probable causes of each individual's inability to develop skill in the tap dance. The findings will be presented in the following order:

- a. Intelligent score

- b. Personality Rating

- (1) Bernreuter Personality Inventory

- (a) Neurotic tendency

- (b) Self-sufficiency

- (c) Dominance-submission

- (d) Confidence

- (e) Sociability

- (2) Bell Adjustment Inventory

- (a) Home adjustment

- (b) Health adjustment

- (c) Social Adjustment

- (d) Emotional Adjustment

- c. Rhythmic experience

d. Rhythmic Ability Test

- (1) First administration
- (2) Second administration

e. Relaxation

2. The clinical procedures as indicated by the study of the data obtained from the tests and check lists.
3. The results or changes made in ability of students to learn to tap dance as a result of the procedures used in the clinic.

Case Number 1

On the single administration of the Otis Self-Administering Test, Case 1 has a raw score of 29, which indicates normal intelligence.

Scores obtained from the Bernreuter Personality Inventory indicated that this student was sociable and gregarious, exceptionally well adjusted, self-confident, disliked solitude, and sought advice and encouragement. Her low percentile score of 42.2 on the measure of dominance-submission indicated that she is submissive. This trait was noticeable in that she did not seek help until her fear of failing in the activity prompted her to ask for assistance.

The Hugh M. Bell Adjustment Inventory indicated excellent home adjustment, good health adjustment, average

social adjustment, and good emotional adjustment.

The total score of 91 on the first administration of the original Rhythmic Ability Test indicated Case Number 1 was superior in rhythmic ability. She was able to: recognize counts for written rhythmic patterns, perceive rhythm, and reproduce rhythmic patterns by clapping and walking. This ability was due to her experience in rhythmic training.

According to her "Felt-Difficulties," Case Number 1 considered her problems to be tension and discouragement developed during the first few lessons in the major tap class. She was unsuccessful in acquiring the beginning tap skills. An indifferent attitude was acquired which resulted in insufficient practice and application to class work.

Observation of general behavior of Case Number 1, by the investigator, in the tap class for major students indicated that she appeared to be relaxed, executed the steps too fast, failed to perform all steps in sequence, seemed to learn the steps, but was unable to make the transition between them, and became confused and appeared to be unable to concentrate.

Before the individual program of work could be assigned, a further analysis of the difficulty of Case Number 1 brought out the fact that she had not learned

the steps, but was imitating other performers, which accounted for her inability to make the transition between steps.

The program of work in the clinic for this student included the practice of relaxation devices, since there was a conflict between tension felt by the student and relaxation observed by the experimenter; emphasis on analysis of the elements of the steps; and practice done in a slow, even pace, allowing for time to think ahead so that transition from step to step could be made.

By means of the use of rhythmic devices; analysis of the elements of the steps; and practice done in a slow, even pace, Case number 1 was taught to perform the tap dance steps rhythmically in the correct tempo and make satisfactory transitions from step to step.

Case Number 2

This student has superior intelligence with a raw score of 43 on the Otis Self-Administering Test.

A low percentile score of 34.6 on the measure of neurotic tendency of the Bernreuter Personality Inventory suggests that this student tends to be exceptionally well adjusted to life. She also tends to be submissive as indicated by a low score of 34.2 on the measure of dominance-submission. The inventory further indicates that she is

sociable and gregarious, wholesomely self-confident, well adjusted to her environment, and seeks advice and encouragement.

The Bell Adjustment Inventory reveals that this student has excellent home adjustment, good health adjustment, average social adjustment, and good emotional adjustment.

The average social adjustment of this student as measured by Bell's Inventory and the measure of self-sufficiency measured by the Bernreuter Inventory, indicated that this student seeks advice and encouragement frequently, which coincides with the observations of the investigator. Although she failed to grasp the steps in class, she seldom sought help until after the class period. She would then obtain assistance from a student who could perform the activity well, and for tests would always manage to be included in a group of good dancers.

As shown in Table IX of Rhythmic Experiences, Case Number 2 has not had any rhythmic training in dancing other than the required courses in the physical education program at the Texas State College for Women. Her rhythmic training in music was limited to participation in an elementary and high school chorus.

The score on the first administration of the original Rhythmic Ability Test was 58.¹ Her rhythmic ability was equally poor in the four divisions of the test.

This student was unusually tense, with jerky, uneven movements and a distinct mannerism of frequently flexing the wrist while dancing.

The "Felt-Difficulties" of this student were ranked in the following order: (1) fear of performing before the class, (2) tension, (3) lack of rhythmic perception, and (4) inability to transfer rhythmic perception to a motor response. The third and fourth items of No. 2's "Felt-Difficulties" coincided with difficulties found on the original Rhythmic Ability Test. They were inability to recognize rhythmic patterns, associate counts with meters, and reproduce the perception of rhythmic patterns by walking and clapping.

This student's program in the clinic included practicing the relaxation devices, learning to associate counts with various meters, writing rhythmic patterns, analyzing fundamental steps and creating step patterns to original rhythmic patterns.

¹Appendix, p. 90.

She was taught to practice the steps very slowly and with exaggerated movements. She gained confidence rapidly and was able to relax. The mannerisms indicating tension disappeared as she gained skill in tap dancing.

Her score increased from 58 to 85 on the original Rhythmic Ability Test.

Case Number 3

This student has normal intelligence with a score of 37 on a single administration of the Otis Self-Administering Test.

A high percentile score of 72.8 on the measure of neurotic tendency of the Bernreuter Personality Inventory implies that this student is emotionally unstable. This is also evidenced on the Bell Adjustment Inventory by a score of unsatisfactory on emotional adjustment. The low percentile score of 49 on the Bernreuter Inventory denotes a dislike of solitude and the seeking of advice and encouragement. Her tendency to be self-conscious and to have feelings of inferiority is indicated by a high score on the scale measuring confidence in one's-self. There is also a high score on the scale measuring sociability, designating a tendency to be non-social, solitary, or independent. Her tendency to be submissive is shown by her low score on the trait measuring dominance-submission.

The Bell Adjustment Inventory indicates that this student is rated very unsatisfactory in home adjustment, very unsatisfactory in health, and aggressive in social adjustment.

According to the Check List of "Felt-Difficulties," Case Number 3 considered her problems to be (1) lack of practice, (2) tension, (3) fear of performing before the class, and (4) fear and emotional disturbance related to first experiences in a new and unfamiliar activity.

Case Number 3 has had more rhythmic training than any of the other members of the group. This was clearly shown by the scores of 96 and 99 made on the first and second administrations of the original Rhythmic Ability Test.

Her independent and indifferent attitude hindered her from attaining skill in tap dance. This difficulty was overcome by the application of the personality adjustment devices. She especially improved in her attitude when given an opportunity to explain various items concerning rhythm.

Case Number 4

According to the score of 54 made on the Otis Self-Administering Test, Case 4 is superior in intelligence.

This student, as measured by the Bernreuter Personality Inventory, is well adjusted to life, independent, self-confident, dominant in face-to-face situations, and prefers to be alone.

The Bell Adjustment Inventory indicated that her health and home adjustment are unsatisfactory.

She listed her "Felt-Difficulties" in the following order: (1) too tall and awkward to dance, (2) tension, (3) failed to grasp the first few lessons, and (4) lack of concentration.

From the writer's viewpoint, the student used the first reason of being "too tall and awkward to dance" as an excuse for her failure in the first few lessons, since she was not exceptionally tall.

Her scores on the original Rhythmic Ability Test were very good, 82 on the first administration and 91 on the second. Her rhythmic training consisted of three semesters of dance, two months of piano, and participation in a church choir.

Although she did not entirely overcome the idea that she was too tall and awkward to dance, the realization of her individual improvement in motor response from day to day lessened this erroneous idea.

Case Number 5

Case Number 5 has a score of 39, indicating normal intelligence.

Her personality traits are very good according to the Bernreuter Personality Inventory, and the Bell Adjustment Inventory. As measured by the scales of neurotic tendency, self-sufficiency, dominance-submission, confidence, and sociability on the Bernreuter Inventory, this student is exceptionally well adjusted to life, dislikes solitude and often seeks advice and encouragement, tends to be dominant in face-to-face situations, is wholesomely self-confident, and is sociable and gregarious.

According to the Bell Adjustment Inventory, she has excellent home adjustment, good health, social aggressiveness and good emotional adjustment.

The results of the two inventories do not show any indication of personality traits which might affect this student's ability to learn tap dance.

The check list of "Felt-Difficulties" revealed the student's realization of her inability to perceive rhythm, transfer rhythmic perception to a motor response, and relax.

Although she sang in a choir for several years, it did not prove to be an asset in rhythmic training and

education as measured by the original Rhythmic Ability Test.

Her scores on the Rhythmic Ability Test were 55 and 78 for the first and the second administration, respectively.

This student was confronted with the problem of learning the elements of rhythm and transferring rhythmic perception to a motor response. Her inability to relax made it more difficult for her to respond rhythmically because of jerky, restricted movements.

Jacobsen's relaxation technique and the relaxation devices, coupled with the slow, even clapping and walking of rhythmic patterns, greatly improved this student's skill in tap dancing.

Case Number 6

Case Number 6 is a girl of superior intelligence with a score of 43 as measured by the Otis Self-Administering Test.

According to her rating of the "Felt-Difficulties", the reasons for her slowness in learning tap dance were: (1) the regular tap class had progressed too rapidly for the class as a whole; (2) inability to keep up with the activity had caused a dislike of it, which resulted in a lack of practice and concentration; (3) tension; and (4) fear of performing before a class.

From observation of Case Number 6 in the required course in tap, it was noticed that when she was performing before the class, her lack of confidence was a contributing factor to the development of fear. This fear, being a "bad fear," because it is negative and therefore disintegrating, resulted in the student's inability to perform at all, since one of the effects of fear is lack of muscular coordination.

As measured by the Bernreuter Personality Inventory, this subject's percentile rank in neurotic tendency was 10, indicating that she is exceptionally well adjusted. The percentile rank for the measure of self-sufficiency was 26.2, signifying that she dislikes solitude and often seeks advice and encouragement. A score of 57.6 implies that this student is dominant in face-to-face situations. Although a score of 15.2 indicates that this student tends to be wholesomely self-confident, she lacked that confidence in learning tap dance. Case Number 6 made the lowest possible score of 1 on the measure of sociability, indicating that she is sociable and gregarious.

The total score of 13 received on the Bell Adjustment Inventory denotes good total adjustment, since her scores for the four measures were average home adjustment, good health adjustment, social aggressiveness, and excellent emotional adjustment.

The results obtained from both the Bell Adjustment Inventory and the Bernreuter Personality Inventory¹ would indicate that there was no personality difficulty that would cause the student to be slow in learning tap skills.

As shown by the check list of rhythmic experiences, this subject has had six months of piano and four college semesters of dance; namely, folk, modern, tap and a combination of ballet and ballroom dancing.

On the original Rhythmic Ability Test, this student received a score of 76 on the first administration of the test and a score of 94 on the second administration, at the end of the semester.

This student's problems were to relax and to gain confidence in her ability to tap dance.

During the clinic, she learned to work alone, analyzing the steps and rhythmic patterns, thereby gaining a sense of accomplishment and self-confidence in her ability to tap dance.

Case Number 7

Case Number 7 has normal intelligence, as measured by a score of 35 on a single administration of the Otis Self-Administering Test.

¹Appendix, p. 91.

The Bell Adjustment Inventory reveals that her home adjustment is good, health adjustment is unsatisfactory, social adjustment is average, and emotional adjustment is excellent.

According to the Bernreuter Personality Inventory, this student is emotionally unstable, non-social, and rarely seeks advice and encouragement from others, which is contrary to the traits as measured by the Bell Adjustment Inventory.

The check list of rhythmic experiences indicates that this student has not had any music education. Her dance training consisted of one semester of tap dance, and two semesters each of folk and modern dance. This lack of rhythmic training may be the cause of her low score on the original Rhythmic Ability Test. She made the lowest score, 37, on the first administration of the test. However, she made the greatest improvement of all in the group on the second administration.

According to the check list of "Felt-Difficulties," she realized her inability to transfer rhythmic perception to a motor response; but she did not realize that she lacked rhythmic perception. Other difficulties listed were tension, fear of performing before a class, and lack of practice.

The first few times that records were played for the students to recognize the meter and to synchronize their counting with the primary beats of the music, this student could not do either one.

She was unusually tense as was indicated by her jerky, uneven tap movements, her clenched fists, and her slightly-flexed, very rigid elbow joints. She became tense and concentrated to such an extent that she would not notice that the accompaniment had stopped and that the class was ready to begin something new.

To improve her tap dance skill, this student would need to attain relaxation while performing the activity, and to gain a thorough knowledge of the elements of rhythm.

At the end of the clinic period, this student's ability to relax had increased, but not without conscious effort.

A knowledge of the elements of rhythm, plus the practice of the rhythmic devices, improved her ability to perform tap dance skills.

Case Number 8

This student has normal intelligence with a score of 32 on a single administration of the Otis Self-Administering Test.

Her personality traits, as measured by the Bell Adjustment Inventory and the Bernreuter Personality Inventory, reveal that the individual is well-balanced emotionally, self-confident, sociable and gregarious, dominant in face-to-face situations, but prefers to be alone, which trait was very noticeable in the required course in tap dance.

She rated the statement, "failed to grasp the first few lessons and therefore became discouraged" as number 1 on her check list of "Felt-Difficulties." Since she failed in the first few lessons and preferred to work alone, she missed the assistance and enthusiasm of the other students, which would have aided her in succeeding, and in turn to appreciate the activity. The lack of encouragement from others also tended to make her neglect practice of the activity in which she was failing, because the natural tendency is to repeat activities which are satisfying rather than those which are not. This discouragement and lack of practice brought about tension and fear of performing before the class, which probably resulted in a lack of confidence and failure to succeed in the activity.

The rhythmic experiences of Case 8 were limited to three semesters of dance; namely, modern, folk, and tap. The music training consisted of one college course

in class voice and participation in a high school choir and in a church choir.

Her scores on the original Rhythmic Ability Test were 74 and 88 for the first and the second administrations, respectively.

At the beginning of the clinic, this student was indifferent to group work and required encouragement to try certain skills. However, the enthusiasm of the members of the clinic to help one another increased this student's interest in the group work and the activity.

Case Number 9

Case 9 is a student with normal intelligence as indicated by a score of 32 according to the norms established for college women on the Otis Self-Administering Test.

Her total score of 24 on the Bell Adjustment Inventory is considered good total adjustment. Her scores revealed good home adjustment, average health adjustment, average social adjustment, and good emotional adjustment. The scores on the Bernreuter Personality Inventory coincide with those on the Bell Adjustment Inventory. However, the measure of self-sufficiency on the Bernreuter Inventory indicated that this individual preferred to be alone. This trait was quite evident to one observing her

performance in the required course in tap dance. She would invariably work alone in the class except when group assignments were made. She was extremely timid and reserved, and did not mingle with the other students.

Her rhythmic training was limited to three required courses in dance and one semester of class voice. Scores on the original Rhythmic Ability Test were 57 and 81 for the first and the second administrations, respectively.

Her "Felt-Difficulties" definitely were: (1) lack of rhythmic perception, (2) inability to transfer rhythmic perception to a motor response, (3) tension, and (4) fear of performing before a class.

The investigator took advantage of every opportunity to meet this student and talk with her on the campus. In the clinic, she was called upon to give suggestions and demonstrate her original work. Her improvement in self-confidence was much greater than that of the other students. At the end of the semester or clinic period, she had become eager and enthusiastic in the work of the other girls and was not timid in presenting her original material to the group.

Case Number 10

This student made a score of 51 on the single

administration of the Otis Self-Administering Test, denoting very superior intelligence according to norms established for college women.

The Bernreuter Personality Inventory revealed that this student is emotionally unstable and tends to be self-conscious and submissive. Low scores on the scales measuring sociability and self-sufficiency point out that this girl is inclined to be sociable and gregarious, and seek advice and encouragement.

The Bell Adjustment Inventory indicated good health and excellent home adjustment.

The "Felt-Difficulties," as ranked by this student were: (1) fear of performing before a class, (2) progression of class work too rapid, (3) inability to grasp the first few lessons which led to discouragement and lack of practice, (4) preconceived idea of inability to dance. Her difficulties were probably due to her nervous, emotional state, as indicated by the Bernreuter Personality Inventory, making her less efficient in the practice and performance of tap dance.

This student has had three semesters of dance and four years of piano. This rhythmic training was reflected in her scores of 84 and 93 on the original Rhythmic Ability Test.

Her main problem, was to gain confidence and learn to relax.

This was accomplished to some extent by means of a better understanding of rhythm in relation to the dance steps, and by practicing the steps in a definitely relaxed and slow manner.

The cooperative and congenial attitude of the other students helped to break down this individual's preconceived idea of her inability to dance, and gave her confidence.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study evolved as a result of the need for diagnosing the difficulties and developing devices for students majoring in health and physical education, as potential teachers of dance activities as one phase of an all-round physical education program, who failed to attain skill in tap dancing.

The procedures employed by the investigator in conducting the study included the following steps: (1) the selection of the students participating in the clinic; (2) the selection of the time and place for conducting the clinic; (3) the selection or construction of the diagnostic tests and check lists; (4) the administration of these tests and check lists at the beginning of the experimental period; (5) the development of devices to be used in the clinic; (6) the application to the students' needs in the clinic during the spring semester, 1944; and (7) the re-administration of the original rhythmic test at the conclusion of the experimental period.

Findings are reported in the case records of each student by an analysis of test scores from the Otis Self-Administering Test, Bell Adjustment Inventory,

Bernreuter Personality Inventory, and the original Rhythmic Ability Test; results obtained from the Check List of Rhythmic Experiences, and the Check List of "Felt-Difficulties"; and observation of the students by the investigator.

From the analysis of tests, check lists and observations by the investigator, the individual program for each student was planned.

The results or changes made in the ability of the students to learn tap dance as a result of the procedures used in the clinic are reported in the case records.

Case Numbers 1, 3, 4, and 10 made the highest scores on the first administration of the Rhythmic Ability Test. They also had the most rhythmic training. On the second administration of the same test, their scores increased, maintaining their relative positions. Each score of cases 1, 3, 4, and 10 was increased from three to nine points.

Case Numbers 2, 5, 6, 7, 8, and 9 made the lowest grades on the first administration of the Rhythmic Ability Test. They had had very little rhythmic training. On the second administration of the same test, these students' improvement ranged from eighteen to forty-three points.

Training in rhythm in the clinic consisted of information concerning musical meter, perception of rhythmic patterns, and motor response to rhythmic patterns by clapping and walking. Perception of rhythm and rhythmic response was also increased by use of phonograph records.

Personality characteristics of cases 1, 3, and 10 were submissiveness, self-consciousness, feelings of inferiority, and emotional instability. Case number 4 was non-social, solitary, and independent.

The devices used in the clinic for personality adjustments included letting the students explain items they were familiar with, thus gaining confidence, making the student aware of her individual progress, and developing self-assurance in the student through her realization of her capabilities.

With respect to their self analysis of "Felt-Difficulties", nine of the ten cases ranked tension as a reason of their inability to tap dance. Five of the nine cases ranked tension as second in importance.

Fear of performing before the class increased tension and was given by seven of the ten students as a reason for lessening their efficiency in learning tap dance.

Jacobson's technique for relaxation was used to increase general relaxation of the body, and specific

devices were developed for increasing relaxation while tap dancing.

Conclusions

As a result of this study, the investigator offers (1) an original rhythmic test which may be used for diagnostic and achievement purposes of measuring rhythmic ability, and (2) devices for improving rhythmic ability, relaxation and personality adjustment, which are necessary for the development of skill in tap dancing.

Although there was no scientific device employed in the study to determine the student's improvement, the case records give an estimate of each student's improvement regarding her particular problems. The students and the investigator feel that much improvement was made, and that the devices were valuable. The experimental period was too brief to ascertain the full benefit to be derived from the use of the various devices.

Recommendations

The investigator wishes to make the following recommendations and suggestions:

1. The original Rhythmic Ability Test should be revised and standardized.

2. The original Rhythmic Ability Test or similar test should be given at the beginning of courses in Tap Dance to determine:
 - a. Knowledge of musical meter
 - b. Perception of rhythm
 - c. Motor response
3. There should be an additional required course in tap dance for students who are majoring in health and physical education but unfamiliar with the activity, or
4. The beginning course in tap dance should be divided into two sections to separate the experienced from the inexperienced students.
5. A course in rhythmic form and analysis to precede the dance courses should be required.

Suggestions for other studies relating to this problem are:

1. Develop a course of study in rhythmic form and analysis.
2. Use a study, similar to the present one, involving a larger group of students over a longer period of time.

3. Develop more devices for overcoming difficulties of personality adjustment, relaxation, and rhythmic ability in relation to tap dancing.
4. Make a thorough study of either rhythm, relaxation, or personality and its relationship to skill in tap dancing.

APPENDIX

CHECK LIST OF "FELT-DIFFICULTIES"

In your opinion, which of the following factors hindered you from attaining a high degree of skill in tap dancing? You may list any additional factors which you believe to be the cause of your difficulties. Rank these statements in order of importance according to your "felt-difficulties".

1. Lack of rhythmic perception
2. Inability to transfer rhythmic perception to a motor response
3. Lack of practice
4. Lack of concentration
5. Tension
6. Fear of performing before the class
7. Fear and emotional disturbance related to first experiences in a new and unfamiliar activity
8. Dislike dance activities
9. Dislike tap dancing
10. Lack of understanding of the analysis of the fundamental tap steps
11. Preconceived idea of inability to dance because of inexperience
12. Failure to grasp the first few lessons which led to discouragement and a lack of interest in the activity.
- *13. The regular tap class had progressed too rapidly for the class as a whole

List in Order of Importance

| <u>Rank</u> | <u>Number of Statement</u> |
|-------------|----------------------------|
| 1. | _____ |
| 2. | _____ |
| 3. | _____ |
| 4. | _____ |
| 5. | _____ |
| 6. | _____ |
| 7. | _____ |
| 8. | _____ |
| 9. | _____ |
| 10. | _____ |

*Additional difficulty listed by the students.

Name _____

TABLE V

RANKING OF THE FACTORS OF "FELT-DIFFICULTIES"
BY THE TEN STUDENTS

| Factor | First Place | Second Place | Third Place | Fourth Place | Fifth Place | Six Place | Total |
|--------|----------------|-----------------|----------------|-----------------|----------------|--------------|-------|
| 1 | 1 | 0 | 1 | 1 | 0 | 0 | 3 |
| 2 | 2 | 1 | 0 | 1 | 0 | 0 | 4 |
| 3 | 2 | 0 | 3 | 2 | 0 | 0 | 7 |
| 4 | 0 | 0 | 1 | 2 | 2 | 1 | 6 |
| 5 | 0 | 5 | 2 | 0 | 1 | 1 | 9 |
| 6 | 2 | 0 | 1 | 2 | 1 | 1 | 7 |
| 7 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| 12 | 1 | 1 | 2 | 0 | 0 | 0 | 4 |
| 13 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |

RHYTHMIC ABILITY TEST

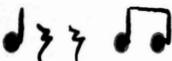
NAME _____

SCORE _____

PART I

Directions: Write the numerical count under each note for the following rhythmic patterns. One point is given for each correct rhythmic pattern.

Example: 
1 2 3 4 &

A. 4/4 Meter1. 2. 3. 4. 5. 6. 7. 8. 9. 10. B. 3/4 Meter1. 2. 3. 4. 5. C. 2/4 Meter1. 2. 3. 4. 5. 

D. 6/8 Meter

PART II

Directions: Twenty-five rhythmic patterns will be tapped on a wood-block. Each pattern will be preceded by the primary beats of the meter to set the tempo. Underline each count on which a beat occurs in the rhythmic pattern. Example: 4/4 meter

Pattern

Recorded 1 & 2 & 3 & 4 &

A. 4/4 Meter

1. 1 & 2 & 3 & 4 &

6. 1 & 2 & 3 & 4 &

2. 1 & 2 & 3 & 4 &

7. 1 & 2 & 3 & 4 &

3. 1 & 2 & 3 & 4 &

8. 1 & 2 & 3 & 4 &

4. 1 & 2 & 3 & 4 &

9. 1 & 2 & 3 & 4 &

5. 1 & 2 & 3 & 4 &

10. 1 & 2 & 3 & 4 &

B. 3/4 Meter

1. 1 & 2 & 3 &

3. 1 & 2 & 3 &

2. 1 & 2 & 3 &

4. 1 & 2 & 3 &

5. 1 & 2 & 3 &

C. 2/4 Meter

1. 1 & 2 &

3. 1 & 2 &

2. 1 & 2 &

4. 1 & 2 &

5. 1 & 2 &

D. 6/8 Meter

1. 1 2 3 4 5 6

2. 1 2 3 4 5 6

3. 1 2 3 4 5 6

4. 1 2 3 4 5 6

5. 1 2 3 4 5 6

PART III AND IV

Directions: Clap each rhythmic pattern. Walk each rhythmic pattern.

A. 4/4 MeterB. 3/4 MeterC. 2/4 MeterD. 6/8 Meter

TABLE VI
SCORES MADE BY THE TEN STUDENTS ON THE
ORIGINAL RHYTHMIC ABILITY TEST

| Case Number | First Administration | Second Administration | Number of points Improved |
|-------------|----------------------|-----------------------|---------------------------|
| 1 | 91 | 97 | 6 |
| 2 | 58 | 85 | 27 |
| 3 | 96 | 99 | 3 |
| 4 | 82 | 91 | 9 |
| 5 | 55 | 78 | 23 |
| 6 | 76 | 94 | 18 |
| 7 | 37 | 80 | 43 |
| 8 | 74 | 88 | 14 |
| 9 | 57 | 81 | 24 |
| 10 | 84 | 93 | 9 |

TABLE VII

PERCENTILE SCORES OF THE TEN STUDENTS ON THE
BERNREUTER PERSONALITY INVENTORY

| Case No. | B1 | B2 | B4 | F1 | F2 |
|----------|------|------|------|------|------|
| 1 | 41 | 41 | 42.2 | 38.4 | 35.8 |
| 2 | 34.6 | 46 | 34.2 | 44 | 21.6 |
| 3 | 72.8 | 49 | 44.2 | 65.2 | 72 |
| 4 | 28 | 66.8 | 74.2 | 19.6 | 61 |
| 5 | 26.2 | 23 | 60.4 | 36.4 | 15.8 |
| 6 | 10 | 26.2 | 57.6 | 15.2 | 1 |
| 7 | 56 | 82.5 | 50.4 | 32.8 | 38.2 |
| 8 | 17.4 | 51.9 | 70.6 | 32.8 | 16.6 |
| 9 | 6 | 60.8 | 79.8 | 7.8 | 17 |
| 10 | 59 | 38 | 15.2 | 63.2 | 46.6 |

TABLE VIII
SCORES MADE BY THE TEN STUDENTS ON THE
ADJUSTMENT INVENTORY

| Case | Home | Health | Social | Emotional | Total |
|------|------|--------|--------|-----------|-------|
| 1 | 0 | 3 | 17 | 7 | 27 |
| 2 | 1 | 4 | 17 | 7 | 29 |
| 3 | 19 | 17 | 6 | 20 | 62 |
| 4 | 12 | 13 | 8 | 13 | 46 |
| 5 | 1 | 3 | 2 | 7 | 13 |
| 6 | 6 | 2 | 4 | 1 | 13 |
| 7 | 3 | 14 | 13 | 3 | 33 |
| 8 | 7 | 6 | 7 | 4 | 24 |
| 9 | 2 | 6 | 9 | 7 | 24 |
| 10 | 1 | 2 | 17 | 5 | 25 |

TABLE IX
RHYTHMIC EXPERIENCE OF THE TEN STUDENTS

| | Case 1 | Case 2 | Case 3 | Case 4 | Case 5 | Case 6 | Case 7 | Case 8 | Case 9 | Case 10 |
|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Piano | 6W* | | 6Y | 2M | | 6M | | | | 4Y |
| Voice | 4½M | | | | 9M | | | 4½M | 4½M | |
| Chorus | 2Y | 3Y | 4Y | 2Y | 2Y | | | 2Y | | |
| Instru- ments | 6¼Y | | 4Y | | | | | | | |
| Band | 2½Y | | 4Y | | | | | | | |
| Orchestra | 3Y | | | | | | | | | |
| Folk | 4½M | 4½M | 4½M | 4½M | 4½M | 4½M | 9M | 9M | | 9M |
| Tap | 4½M |
| Modern | 4½M | 9M | 4½M | 4½M | 4½M | 4½M | 9M | 4½M | 4½M | 9M |
| Ballet | | | | | | 7W | | | | |
| Ballroom | | | | 3M | 6M | | | | | |

*The "W" indicates weeks; "M" indicates months;
"Y" indicates years.

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