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Victoria Van Beusekom

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THE DEVELOPMENT AND EVALUATION OF A DIAGNOSTIC INSTRUMENTAL  
MUSIC SURVEY FOR USE IN THE RECRUITMENT OF ELEMENTARY  
INSTRUMENTAL MUSIC STUDENTS

A Thesis

Presented to the

Department of Music

and the Faculty of the Graduate College

University of Nebraska

In Partial Fulfillment of the Requirements for the Degree

Master of Music

University of Nebraska at Omaha

by

Victoria Van Beusekom

July 2001

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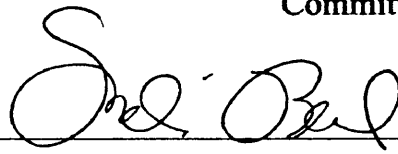


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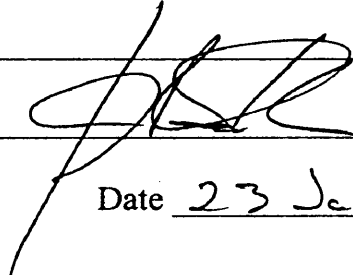
Acceptance for the faculty of the Graduate College,  
University of Nebraska, in partial fulfillment of the  
requirements for the degree Master of Music,  
University of Nebraska at Omaha.

Committee





Chairperson



Date 23 July 2001

THE DEVELOPMENT AND EVALUATION OF A DIAGNOSTIC INSTRUMENTAL  
MUSIC SURVEY FOR USE IN THE RECRUITMENT OF ELEMENTARY  
INSTRUMENTAL MUSIC STUDENTS

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University of Nebraska, 2001

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This research suggests that the researcher designed Instrumental Music Survey (IMS, 1999) can be a valid predictor of student success in instrumental music. This study completed in the Omaha Public School District, Omaha, Nebraska, used subjects whose background varied in terms socioeconomic, race, urban, and suburban areas. The first hypothesis examined the reliability of the IMS. Using the Spearman Brown reliability formula, reliability of the IMS was found to be .734. Using the Watkins-Farnum Performance Scale (WFPS, 1954) as a measure of the student's success in instrumental music, the researcher found that a good correlation exists between the students' scores on the IMS and WFPS. This correlation coefficient was found using Pearson correlation coefficient, and determined the coefficient was .427. An ancillary hypothesis analyzed if previous instrumental music experience is a good predictor of success in another area of instrumental music. Using an effect size formula, the researcher found that students with previous instrumental music would perform better than 66% of students without instrumental music experience. Factors exist which may prevent the student's success on an instrument such as; 1) the student's physical characteristics are incorrect for the instrument, 2) parental support for the student's success in instrumental music, and 3) the student's motivation to become successful in instrumental music.

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## CHAPTER I

### INTRODUCTION

Recruitment of instrumental music students is an issue that music educators face throughout all grade levels. Since many students who participate in the middle school and high school instrumental music programs began their involvement as elementary students, the elementary instrumental music recruitment process is important for music educators at all levels. The methods of recruitment vary among individual music instructors, school districts, and regions of the country. Some music educators rely on the academic achievement as predictor of success in instrumental music. Other music educators rely on the individual student to demonstrate interest and prior to his/her participation in instrumental music. Recent studies suggest an effect of the selected recruiting strategies on beginning instrumentalists' participation. Many students may not be attracted to an invitation to begin instrumental music activities because they were uncertain about the caliber of their musical abilities (Nierman and Veak, 1997).

In the Omaha metropolitan area, many forms of recruitment exist for the elementary instrumental music student. The recruitment of instrumental music students may consist of a short video describing the instruments and their sonorities. Many area school districts invite local music stores to bring in musical instruments and allow the potential music student to choose. Sometimes the instrumental music students are guided by an experienced music advocator and/or music salesperson that checks the potential music student's embouchure and hands to ensure that the student can be successful.

The elementary music educators in the Omaha Public School District (OPS), in Omaha, Nebraska, use a variety of methods to recruit their students. Unlike many of the neighboring school districts whose student population consists primarily of a

homogeneous student body, the OPS student body has much diversity in terms of race, and socioeconomic status. These variables may contribute to the student's success in instrumental music (Klinedist, 1991).

Some educators have argued that this diversity in these areas effect the learning styles of the student body. James McCarthy and J.P. Mitchum have examined the effect of socioeconomic status on success of beginning instrumentalists. The conclusions of their studies indicate a significant relationship exists between socioeconomic status and both achievement and retention of students (Klinedinst, 1991).

Prior to the discussion of the recruitment of elementary music students, two issues need to be addressed; the current recruitment strategies of instrumental music employed by OPS music educators, and the strategies OPS music educators use when issuing OPS owned instruments.

#### Existing Recruiting Strategies and Strategies for Issuing OPS Owned Instruments

Currently in the OPS district, there is no standardized policy or procedure for the recruitment of elementary music students. Much of the student recruitment is completed during the fall. Some music educators ask the classroom teachers to make academic assessments of students based on their limited knowledge of their charges. Those who appear to demonstrate academic achievement are encouraged to participate in instrumental music. Some music educators rely on student interest and his/her ability to obtain an instrument; others use an approach, which may include aspects of both methods.

Each elementary music educator is allowed to choose his/her method of recruitment. Some music educators hold recruiting demonstrations where current instrumental music students play for students in the fourth grade to recruit for beginning orchestra students or fifth grade for beginning band students. Or the music educator may



bring several instruments and demonstrate these instruments to these students. Others may use a video explaining the instruments and their sonorities. A short question and answer session normally follows these types of recruitment, which answers students' questions to: "Where do I get an instrument?", "What do I need to study instrumental music?", and "Are there school owned instruments available for use?"

Another issue of concern is that no policy exists for the issuance of OPS owned instruments. OPS music educators may use any method for determining who is allotted an OPS owned instrument. Some music educators choose students by pulling names out of a hat. Other music educators require that the student demonstrate economic hardship. Previous academic achievement is another criteria that some OPS music educators use to determine who would benefit most from an OPS owned instrument.

In many areas of the OPS district, students may come from a home life of low socioeconomic backgrounds, and as a result it may be difficult to choose which student has the most economic need. Further more in other areas of Omaha, the median family income is higher than those in eastern Omaha. Since median family income is lower in east Omaha, one could argue that more students in the urban areas of Omaha will demonstrate greater economic need. The distribution of OPS owned instruments needs to be addressed further in depth. Each area of the OPS district has needs and concerns specific to each area.

Often midway through the year, the music educator finds available instruments because students drop out of the program. The music educator attempts to find more students who may be successful. Often, it is these students, who may not demonstrate academic achievement or economic hardship that are found and are successful in instrumental music. It is the element of chance that the researcher is trying to ameliorate.

### Origin of OPS Instruments

The OPS system does have an allotment of district owned instruments that are available for student use. Some of these instruments originated from the Elementary and Secondary School Act, Title 1, 1965, in which federal funds were given to school districts to purchase musical instruments. The purpose of this legislation was to provide financial aid to those schools classified as culturally disadvantaged so that exiguous educational and cultural opportunities, which are supposedly associated with such institutions, might be mitigated (Gordon, 1975). As a result, students of low socio-economic background are given the opportunity to study instrumental music. Some of the instruments available are those whose cost may be prohibitive to the students' families, e.g. string bass, horn, and bassoon.

In order to facilitate proper instrumentation in the middle and high school instrumental ensembles, the OPS instrument inventory provides instruments necessary for a balanced wind ensemble or orchestra. These instruments, baritones, celli, and tubas, etc., whose cost be may be prohibitive allows students to continue their involvement in instrumental music.

### Hypotheses

#### Hypothesis 1

Using a split-halves formula to measure reliability, the IMS will have poor reliability as measured as lower than .4.

#### Hypothesis 2

The Instrumental Music Survey is not an effective predictor of student success in elementary instrumental music.

### Hypothesis 3

$H_0$  = Beginning band students who participated in the OPS beginning orchestra program prior to their involvement in beginning band will not demonstrate higher scores on the IMS.

Independent variables of this study include the Instrumental Music Survey (Flores, and Van Beusekom, 1999) and Watkins-Farnum Performance Scale: Form A (Watkins-Farnum, 1954).

This study stems in part from research that the researcher conducted based on music achievement, academic achievement and music aptitude in the Bryan Middle School, in the OPS district. Despite research that concludes that students who are successful in instrumental music will demonstrate academic achievement in reading or mathematics, the instrumental music students of Bryan Middle School demonstrated low musical skills in the areas of aural recognition of pitch, melody, and rhythm. (Van Beusekom, 1999). After using Richard Colwel's' Music Achievement Test (MAT, 1969), and Edwin E. Gordon's' Advanced Measures of Music Audiation (AMMA, 1989), the researcher was interested in developing an instrumental music survey to assist the music educator in identifying students who students may possess skills necessary for success in instrumental music.

### Delimitations

Subjects selected for this study were students of Edison Elementary, King Science Center Elementary, and Prairie Wind Elementary in the OPS district. These subjects have completed at least three quarters of instrumental music, though they may have previous music experiences. Some students may have studied piano, while others may have

participated in beginning orchestra as fourth grade students.

The student body of the OPS district is comprised of a variety of socioeconomic levels, and cultures. Though diverse in nature, all elementary students are encouraged to participate in instrumental music. Unfortunately for students in low socioeconomic areas, the number of available school instruments may limit their experience.

The OPS elementary schools are on a 10-day cycle schedule. Students receive instruction in the form of four, thirty-minute lessons in a 10-day cycle period. Since the OPS instrumental music system is designed as a pullout program, students are only able to attend lessons within a small time frame. Therefore, the students are grouped according to his/her classroom teacher's schedule as opposed to homogenous instrumentation. The cycle day schedule is problematic as each weekday does not stay concurrent with the cycle day number due to school recesses; i.e. Monday is not always day 1 and 6. Therefore the incidence of student absence may be slightly higher.

#### Definition of Terms

Academy School: For the purposes of this study, an academy school is a school in a low socioeconomic area designed to address the academic needs of students in this area.

Area Concert: For the purposes of this study, the Area Concert will be defined as the elementary music concert given during the fourth quarter. Each Area Concert will be comprised of four or five schools in a neighboring area in the OPS district. It is the cumulative concert in which all instrumental music students participate.

Instrumental Music Survey: For the purposes of this study, it is the researcher designed musical survey used to test subject's accuracy of discrimination of ability of pitch, rhythmic, and melodic patterns.

Melodic discrimination: For the purposes of this study, melodic discrimination will be defined as the ability to discriminate between sequences of pitches similar or dissimilar in

nature.

Pullout Program: For the purposes of this study, the pullout program will be defined as the instrumental music schedule, which pulls students from their classroom for instrumental music.

Pitch discrimination: For the purposes of this study, pitch discrimination will be defined as the ability to discriminate between pitches similar or dissimilar in nature.

Rhythmic discrimination: For the purposes of this study, rhythmic discrimination will be defined as the ability to discriminate between rhythmic patterns similar or dissimilar in nature.

### Summary

Instrumental recruitment in the Omaha Public School district (OPS) is a multi-faceted topic influenced by factors ranging from OPS owned instruments, current recruitment procedures, and a diverse student body as defined by socioeconomic status, and culture. The primary hypothesis to be tested is the effectiveness of the researcher designed Instrumental Music Survey (IMS) as a predictor of student success in instrumental music. An ancillary hypothesis tests the reliability of the IMS, while a third hypothesis tests the relationship of previous instrumental music as a predictor of student success in instrumental music.

## CHAPTER II

### LITERATURE REVIEW

Researchers in music education are continually trying to build a better mousetrap. As music educators are striving to prove the validity of an aesthetic experience/education, some administrators and school boards desire quantitative numbers of students and ratings to demonstrate the strength of the instrumental music program. Most music educators would argue that a relationship exists among the successful junior/middle school and high school instrumental music programs and the quality of elementary instrumental music program. Success in the elementary music program often is related to the issues of recruitment, retention, academic achievement, and socioeconomic status. As cogs within clockwork, many aspects of the middle school and high school instrumental music programs are ultimately affected by the decisions made by the elementary instrumental music educators. Therefore, research related to the recruitment of instrumental music students, the retention of instrumental music students, and positive predictors to forecast a student's chances for success should be addressed with the utmost attention.

Through the exploration of research dealing with both topics of retention and recruitment, it has been found that retention and recruitment are highly researched areas. This literature review will be divided into four areas to further explore: 1) the effect of certain select recruiting strategies of elementary instrumental music programs, 2) the influence of prognostic test as a predictor success, 3) the validity of the Watkins-Farnum Performance Scale, 4) academic achievement, socioeconomic status, and self-concept in music as a predictor of a student's success and retention.

### Effect of Certain Select Recruiting Strategies

Instrumental music recruitment is important for music educators and prospective instrumental music students. It should educate the students about the instruments of the band and orchestra, and assist in developing the student's interest in band or orchestra. Two common recruitment strategies used by music educators are the demonstration of videos related to musical instruments, orchestras and wind ensembles, and the exploratory experience of playing a recorder prior to instrumental music recruitment. These pedagogical techniques are based on two motivational theories. One suggest that if success is gained on a musical instrument such as the recorder, the student would be more likely to participate in instrumental music because of his/her past achievement (Nierman and Veak, 1997). The other motivational theory suggests that knowledge about the instruments prior to instrumental recruitment would influence student participation in instrumental music (Nierman and Veak, 1997).

The Nierman and Veak study examines the differences of these two theories to determine if one is more likely to encourage student participation in instrumental music. They researched the effects of aptitude, recruitment methods, and the socioeconomic status on a student's desire to pursue studies in instrumental music. One of the hypotheses explored was that students, who have experienced success through an exploratory experience such as playing the recorder, would be more likely to participate in instrumental music.

Using nine different elementary schools of varying socioeconomic background, the subjects were divided into control and experimental groups. The control group studied the recorder prior to instrumental music, while the experimental group watched videos of instrumental music performances. It was hypothesized that the group who had participated in the recorder study would have a greater rate of interest in further

instrumental music studies. After ten weeks of instruction, the subjects completed an attitude assessment questionnaire to test their attitudes towards instrumental music.

Their research found that the students from low socioeconomic areas were less affected by the instruction in recorder. Students from the middle and high socioeconomic areas were more affected by the recorder instruction.

#### Prognostic Tests as a Predictor of Student Success

Previous research has suggested that a relationship exists between a student's prior musical knowledge gained from studies of a musical instrument. A doctoral dissertation completed by J. Z. Bailey, found that previous musical experience from piano instruction was a good prognostication of achievement in instrumental music (Bailey, 1975).

One may question the validity of testing students without prior musical knowledge to assess their skills of pitch, rhythm, and melodic discrimination. In 1972, a study was researched to discover if persons without musical training were able to audiate pitch discrimination as well as those with musical training. The study included persons without musical training and professional musicians. The results indicate that persons without musical training can differentiate almost as well as those with musical training (Lu, Hoskin, and Piper, 1972).

#### Validity of the Watkins-Farnum Performance Scale

The researcher K. Haley, who compared the WFPS to Harold Abeles' Clarinet Performance Test (CPRS), conducted research specific to the validity of the Watkins-Farnum Performance Scale (WFPS). The CPRS differed from the WFPS because the CPRS measures performance on a specific piece of music not the test items given by Watkins-Farnum. Therefore any piece, which is deemed a test item by an instructor or researcher, can be used. The CPRS has a scale consisting of 30 items, separated into six



subscales of five items (Haley, 1998). Using a Rausch Model, a method of analyzing test results that provides the researcher with difficulty estimates, Haley discovered that the WFPS was accurate in its depiction of the difficulty of test items (Haley, 1998).

Academic Achievement, Socioeconomic Status and Student's Self-Concept as a Predictor of Success and Retention

Richard Klinedinst has addressed research concerning the performance achievement and retention of instrumental students. Using eleven variables, Klinedinst found that the strongest predictors of musical success as measured by musical performance were scholastic ability (academic achievement), reading achievement, and math achievement. These best predictors of student retention, also addressed in this study, were found to be the student's socioeconomic status, self-concept in music, reading achievement, math achievement, and scholastic ability. These five variables predicted retention with 97% accuracy (Klinedinst, 1991).

The Conservatory Alberto Ginastera (CAG) in Buenos Aires, Argentina, studied the recruitment and retention of its conservatory students. The CAG hypothesized if a musical aptitude test was administered prior to the admittance of its students, it would assist in the retention rates of its students. The research was completed because the conservatory has an open enrollment policy and government subsidized tuition. Prior to this research, the CAG had a drop out rate of 50% (Musumeci, 1997).

Using the Bentley's Measures of Musical Abilities (BMMA, 1967), the musical achievement of each student was assessed to predict the students' success in music. The subjects participated in a musical language class that involved the production and discrimination tasks (rhythmic and melodic dictations and sight singing) (Musumeci, 1997). After a four month term, the students were administered the Musical Language Examination (MLE) and the BMMA. During previous research, it was found that the

BMMA had predictive validity because it covered subject matter similar to that covered during the MLE. The MLE was used as a criterion variable specifically designed to assess the contents of the conservatory's curriculum (Musumeci, 1997).

It was found that the BMMA best predicted the rhythmic abilities of the subjects. The weakness of this research is limited by its small sample size. Originally 34 students were chosen to participate in the study but after schedule changes and dropouts, the sample size changed from 34 to 14 subjects. The study did suggest using an instrument like the BMMA to assess potential students before admittance to the conservatory.

Edwin E. Gordon has completed research concerning the success of the Elementary and Secondary School Act, Title 1, as related to instrumental music. A five-year study, 1968 - 1973, examined the musical achievement of students from urban areas who were provided with instruments for the purpose of instruction in instrumental music. This research was completed in the Des Moines Public School District. Therefore, the purpose of this longitudinal study was to determine whether, if given similar educational opportunities, students who attend culturally-disadvantaged schools achieve in music at a level comparable to that of students who possess corresponding musical aptitudes but attend culturally-heterogeneous schools (Gordon, 1975). To assist each student in success, this study attempted to allow each student to study the instrument of his/her choice. To facilitate both groups of students learning, highly qualified music educators were provided by the Des Moines Board of Education. It was found that after two years of instruction that little difference existed between the groups of culturally-heterogeneous and culturally-disadvantaged students. Gordon suggests that musically talented students can be identified among any group of students, and after students who can profit most from music instruction are identified, it is imperative that educators give adequate attention .... to these students who are able to compensate for their meager background by

achieving in a discipline in which success is not hampered by irrelevant factors that might be associated with one's past or present cultural background (Gordon, 1975).

In 1982, Steven K. Hedden conducted a study that measured predictors of an elementary student's success in instrumental music. Subjects tested were 144 fifth and sixth grade students in two midwestern towns who received regularly scheduled instruction from a music specialist. Using a multiple regression analysis, it was found that the best single predictor of instrumental music success was academic achievement, though music attitude or one's self concept of musical abilities was rated a close second (Hedden, 1982).

### Summary

Most music educators would agree that successful recruitment of instrumental music students is important to the success of an instrumental music program. Studies concerning recruitment and retention have been studied. Nierman's and Veak's study suggest that the form of recruitment used does have an influential role on the students' interest. Their study addressed that assisting the students in identifying their success in instrumental music can encourage their participation in instrumental music. Prognostic tests have been aided the students and music educators in identifying students with musical ability. Many students may not be aware that they could be successful in instrumental music. The Watkins-Farnum Performance Scale has statistically shown its validity through research concerning comparative studies of instrumental music tests. As the OPS student body is diverse as defined by socioeconomic status, and culture, it is important to note that studies concerning these variables have been studied.

Edwin E. Gordon studied the success of culturally-disadvantaged students who were given instrumental music lessons and provided musical instruments. In this longitudinal study, Gordon discovered that culturally-disadvantaged students could be as successful as culturally-advantaged students.

## CHAPTER III

### METHODOLOGY

The Instrumental Music Survey (IMS) was piloted during the 1999-2000 school year in academy schools in the OPS district. The academy schools were created to help raise the California Achievement Test (CAT) scores of students from low socioeconomic status in the urban areas of the OPS district. The survey was administered to students in these schools.

#### Creation of the IMS

To determine the reliability of the test, the IMS was administered first quarter and third quarter of the 1999-2000. Reliability was tested using the students' scores who began instrumental music study in 1997-1999 and who continued throughout the entire 1999-2000 school year. One of the hypotheses of this research was to determine the reliability of the IMS. (This reliability will be discussed in depth in Chapter four.) Validity of the test was ensured through the aid of experienced music educators who assisted the researcher in evaluating the test.

To facilitate the use of this test, the IMS was recorded on a CD. Each track contains a different test. It was recorded using a Pentium 3 recorder equipped with ART tube microphone pre amp, ADK condenser microphone, and a Yamaha SW1000XG sound card. Cakewalk ProAudio 9 Digital Audio recording software was used to record both the piano and voice together. The Cakewalk software can record digital and audio sounds. Pitches and melodies were played on a Yamaha Clavinova CLP midi keyboard with a setting of "acoustic piano." This piano sound was generated through a Yamaha SW1000XG sound card. The copies of the recording were duplicated using Adaptec EZ CD Creator and a Pentium 3 computer.

### Implementation of IMS

In the fall of the 2000-2001 school year, the IMS was implemented in certain select elementary instrumental music programs. OPS music educators were offered the IMS as a recruitment tool. Certain OPS music educators volunteered to implement as part of their recruitment process. Music educators were asked to administer the test with a protocol developed by the researcher, which included factors such as room size, number of students to be tested, and how to proctor of the IMS (Appendix A). As the students' musical abilities of each building may vary, certain guidelines were given for the interpretation of results. For example, it was suggested that the test norms of the IMS be similar to those scores procured by students with previous instrumental music experience. Meaning that students within a building with previous instrumental music would define for that particular building the upper range of IMS scores. Since time allotted for the recruiting demonstrations was limited, some music educators chose to change the test by eliminating the last five items in the pitch and rhythmic section, thereby each section consisted of 10 items. In order to have consistent scores among all subjects' tests, the scores from the IMS have been converted into percentages.

### Research Design

The subjects used in this research were those who currently participate in the elementary instrumental music program as beginning band students. A pretest and posttest research design was used in which, the researcher investigated the use of scores from the IMS as a prognostic device. The IMS was given to all students in the fifth grades in this study group varying between schools of low and high degrees of academic achievement, low and high degrees of socioeconomic status, and urban and suburban areas. The researcher intentionally chose schools, which were comprised of students of low and high degrees of socioeconomic status, low and high degrees of academic

achievement, and urban and suburban areas to validate the study. During the fourth quarter, the researcher tested the subjects achievement in instrumental music as measured by their performance on the Watkins-Farnum, Performance Scale A (WFPS) (1954). An evaluation of the data from the results garnered from the IMS and the additional information gained from the students during the fourth quarter of the year were used to test the hypotheses.

Statistical tests were used to find correlations and relationships between the IMS scores and the WFPS score of each student. Since this is a primarily pretest-posttest research design, a two tailed t-test would be the most likely choice of tests to determine the significance of the relationship between the subjects' scores on the IMS and WFPS. Yet, the progressive nature of the IMS required that a different measure of reliability be found. Many statistical tests do not accurately measure tests, which are progressive in nature. The Pearson correlation coefficient was used to determine the relationship between the scores of the IMS and WFPS. Correlation coefficients can be used as a measure of the relationship between two tests.

### Measurement Instruments

The IMS is comprised of three subtests, which are designed to measure the areas of pitch discrimination, rhythmic discrimination, and melodic discrimination. Both the pitch discrimination, and rhythmic discrimination contain 15 questions while the melodic sections contain only 10 (Appendix A).

In the pitch discrimination test, the subjects hear 2 pitches, and are asked if the pitches are the same or different. If they are the same, they are to mark S and if they are different they are to mark D. In the rhythmic discrimination test, the subjects hear 2 one measure of a rhythmic pattern, then another one measure rhythmic passage is played. If the students believe that the one measure rhythmic passages are the same, they are to

mark S. If they believe the tests items to be different, they are to mark D. In the melodic discrimination subtests, subjects hear three pitches, and then another three pitches are sounded. If the two melodic passages are the same, they are to mark S for same, and if they are different they are to mark D for different.

At the completion of the test, the students receive specific points for accuracy in each area. Potentially, the scores for each subtest may aid the music educator in finding students who possess specific skills necessary for certain instruments such as French horn, percussion, etc. The total points for each subtest are added to create the total discrimination score for each subject.

The Watkins-Farnum, Performance Scale, Form A, (WFPS) was developed by John G. Watkins and Stephen E. Farnum to measure performance and progress on a musical instrument (Appendix B) (1954). Its popularity rests on its brevity, reliability, and validity. Though similar in nature and difficulty, each instrument is provided with a performance test specific to the nature of the instrument. Each measure of the test item is graded on the characteristic of tempo, pitch accuracy, and rhythm. Fourteen test items comprise of a series of measures, asking each student to demonstrate pitch, rhythmic accuracy and a specific range of notes. Each test item progresses in difficulty. The subject's progression depends on his/her accuracy of performance skills. When the subject fails to complete three measures successfully, the test is complete. A point system has been devised to allow the researcher to allot a specific point value to each student. With each successful completion of a measure, the subject is awarded one point. Errors played by the subject do not adversely affect the subject's point values.

### Subjects

The instrumental music program of the Omaha Public School district consists of both band and orchestra instruction. Students may begin orchestra in fourth grade or may



begin band in the fifth grade. 36 subjects involved in this study participated in beginning fifth grade band instruction at either Edison Elementary, Prairie Wind Elementary or at King Science Center Elementary schools and completed at least three quarters of instrumental music.

### Curriculum

All OPS elementary band students are instructed using the Standard of Excellence by Bruce Pearson. The curriculum objectives for OPS instrumental music are set by the OPS curriculum and dictates the written and performance expectations for each quarter. Most OPS music educators try to instruct beyond the curriculum as an Area Concert during the spring may warrant this instructional material covered prior to the Area Concert. The Area Concert is a concert comprising of four or five schools within the neighboring geographic area. Typically, most beginning instrumental music classes will have covered two major scales, whole notes/rests, half notes/rest, quarter notes/rests, eighth notes/rests and independent part playing.

### Data Analysis

Data was computed from 146 subjects' raw scores on the IMS to determine the reliability of the IMS. Using split halves as a measure of reliability, the researcher equally divided the test into two equal halves and tested the data using the Kuder Richardson 21 and Spearman-Brown formulas. In order to compare the data from the IMS and WFPS to determine if a correlation exists between these two tests, the researcher had to develop a scale that would equally weigh the scores from two tests of differing number of test items. The researcher changed the data from the IMS and WFPS into percentages to facilitate the statistical procedure of the Pearson correlation coefficient. Since the researcher was the only evaluator of the subjects' WFPS, the researcher wanted to avoid any sort of researcher bias that could have occurred in the evaluation of the subjects'

WFPS scores. To validate the reliability of the researcher's evaluation of the WFPS, two impartial music educators reviewed 10 randomly chosen subjects who took the WFPS.

### Summary

OPS music educators were offered the IMS as a recruitment tool. Certain OPS music educators volunteered to implement the IMS as part of their recruitment process. The subjects used in this research were those who currently participate in the elementary instrumental music program as beginning band students. A pretest and posttest research design was used in which, the researcher investigated the use of scores from the IMS as a prognostic device. The researcher intentionally chose schools that were comprised of students of low and high degrees of socioeconomic status, low and high degrees of academic achievement, and urban and suburban areas to validate the study. During the fourth quarter, the researcher tested the subjects' performance achievement in instrumental music using the WFPS. The next chapter will focus on the data analysis as related to the hypotheses.

## CHAPTER IV

### RESULTS

This chapter will discuss the results of the research. Parametric tests were used to measure the data because the variances between the scores of the Instrumental Music Survey (IMS) and Watkins-Farnum Performance Scale: Form A (WFPS) were relatively small. Though the IMS is titled as a survey, it actually measures the subject's ability to discriminate between differences in pitch, rhythm, and short melodic patterns in a parametric manner. The IMS provides a parametric measure of a student's aural musical ability. The researcher experienced some difficulty in finding a statistical test, which would most accurately measure the internal reliability. Some statistical tests do not accurately measure tests, which are not dichotomous like the IMS and the WFPS.

Since the researcher was the only evaluator of the subjects' WFPS, the researcher wanted to avoid any sort of researcher bias, which could have occurred in the evaluation of the subjects' WFPS scores. To validate the reliability of the researcher's evaluation of the WFPS, two impartial music educators reviewed 10 randomly chosen subjects' WFPS scores. Using a Spearman correlation coefficient formula, the researcher's evaluation of these WFPS scores was found to be .9684. Thus it was determined that the researcher's evaluation of the subjects' WFPS scores was valid.

### Hypothesis 1

$H_0$  = Using a split-halves formula to measure reliability, the IMS will have poor reliability as measured by a reliability score of .4 or below.

$H_A$  = Using a split-halves formula to measure reliability, the IMS will have good reliability as measured by a reliability score of .6 or above.

Data for the IMS reliability were derived from the subjects' raw data, e.g., the mean, standard deviation, and variances of scores. The researcher first used the Kuder Richardson 21 formula (KR 21) for measuring the IMS reliability. It was found to be .767. This is a very high score since a score over .7 indicates a good internal reliability.

Table 1

#### IMS Reliability Scores for Using the Kuder Richardson 21 Formula (N=146)

---

Mean = 16.027

SD = 2.344

KR 21 = .767

Test Questions = 40

---

The number of subjects used for the first hypothesis was larger than the number of subjects used for computing the second hypothesis. Several music educators within the OPS music department used the IMS as a recruiting tool. In order to for the IMS reliability to be as accurate as possible, the researcher used these scores from students

included in this study, and those in other OPS schools.

Later, the researcher discovered that this test does not accurately measure the internal reliability for a test that is not dichotomous. It was at this time that the researcher used the Spearman-Brown formula for reliability. The Spearman-Brown formula, unlike the KR 21, can accurately measure tests, which are progressive in nature. Both test use the raw data in the same manner. The Spearman-Brown test determines the coefficient of reliability from split halves. The test is divided into equal halves and each half is compared to the other. The Spearman-Brown test determined that the IMS is reliability factor is .734. Though not as high as the KR 21, this score is still higher than .7 and thus demonstrates the good reliability for the IMS.

Table 2

IMS Reliability Scores for Using the Spearman -Brown Formula (N=146)

---

Mean = 16.027

SD = 2.344

SB = .734

Test Questions = 40

---

As a result of an analysis of the data, the first hypothesis is rejected and the alternative hypothesis was accepted.

After the reliability of the IMS had been ascertained, the researcher tested the main hypotheses.

### Hypothesis 2

$H_0$  = The Instrumental Music Survey is not an effective predictor of student success in elementary instrumental music.

$H_A$  = The Instrumental Music Survey is an effective predictor of student success in elementary instrumental music.

Since both the IMS and WFPS have different numbers of tests items, the researcher translated the subjects' raw scores into percentages. These percentages allowed the researcher to compare effectively the subjects' scores and develop the statistical data needed for the thesis. From these percentages, the researcher found the subjects' overall mean, mean range of subjects' scores, and standard deviation.

Given the pretest and posttest research design, the most common statistical test to use would be a two-tailed t-test to determine the significance of the relationship between the subjects' scores on the IMS and WFPS. Yet, the dichotomous nature of the IMS and WFPS required that a different measure of reliability be found. As previously mentioned many statistical tests do not accurately measure tests, which are progressive in nature. However, correlation coefficients can be used as a measure of the relationship between two tests. The Pearson correlation coefficient was used to determine the relationship between the scores of the IMS and WFPS. The correlation coefficient is .427 (See table 3).

Table 3

Relationship of Scores from IMS and WFPS


---

Subjects = 36	Mean IMS Score = .753	Mean WFPS Score = .611
Mean Range of Scores = 22.1667		
Pearson Coefficient Correlation = .427		

---

Though the Pearson correlation coefficient found between the IMS and the WFP is a pretty strong indicator of the predictive qualities of the IMS, the researcher found four of the subjects' WFPS scores to be extremely low. The range of scores (IMS and WFPS) for the majority of subjects tended to lie within a range of 20 to 30 points. These few subjects had a range of scores that were over 50 points. In using the Pearson correlation coefficient, the range of scores will affect the overall coefficient. The correlation coefficient is disrupted when the range of scores is too great. The bulk of the data set has a very strong correlation coefficient. Meaning if the ranges of scores from a few subjects are completely different from the majority of scores, it will adversely affect the correlation coefficient. Just a few subjects' scores, possibly skewing the results, may significantly influence the mean range of scores. Therefore it is worthy to note that the range of scores from a few subjects may have effected the overall Pearson coefficient correlation (See table 4).

Table 4

Relationship of Scores from IMS and WFPS

---

Subjects = 32                      Mean IMS Score = .749      Mean WFPS Score = .662

Mean Range of Scores = 17.687

Pearson Coefficient Correlation = .543

---

Hypothesis 3

$H_0$  = There will be no significant difference of the WFPS scores between beginning band students who participated in the OPS beginning orchestra program prior to their involvement in beginning band as compared to those without instrumental music experience.

$H_A$  = There will be a significant difference of the WFPS scores between beginning band students who participated in the OPS beginning orchestra program prior to their involvement in beginning band as compared to those without instrumental music experience.

The third hypothesis analyzed the relationship between students with previous instrumental music experience as compared to those without music instruction. Using an effect size formula to determine if a relationship exists between these two groups, the researcher found that students with prior instrumental music experience were more likely to be successful in instrumental music (See table 5). For the purposes of this study, the



control group was made up of students without previous experience in instrumental music, while the experimental group was made up of students who had participated in the OPS beginning orchestra classes.

Table 5

Comparisons of Subjects' Score with Previous Experience in Instrumental Music as Compared to Students without Instrumental Music Experience

---

Control Group Subjects =31	Experimental Group Subjects = 32
Control Group Mean WFPS = .749	Experimental Group Mean WFPS = .662
Standard Deviation = 25.99	
Effect Size = .4436	

---

The score of the effect size .446 demonstrates that students with previous instrumental music experience were more likely to be successful in instrumental music. This effect size suggests that average student with previous instrumental music experience would be able to perform better than at least 66% of the students without previous instrumental music experience.

Summary

This chapter has discussed the data analysis used in determining to test the hypotheses examined. Using the Spearman-Brown formula to determine if the first hypothesis of the IMS concerning its reliability is true, the researcher found that the

hypothesis is false. The internal reliability of the IMS was found to be .734, a good measure of internal reliability. The second hypothesis examined the validity of the IMS as a predictor of student success in instrumental music. To measure the IMS' predictive qualities, the Pearson correlation coefficient was used to determine if a correlation existed between the scores of the IMS and WFPS. This correlation coefficient of the IMS and WFPS was found to be .427. Though .427 is a pretty strong indicator of the predictive qualities of the IMS, the researcher found four subjects' WFPS scores to be extremely low. In using the Pearson correlation coefficient, the range of scores will affect the overall coefficient. The correlation coefficient is disrupted when the range of scores is too great. The bulk of the data set has a very strong correlation coefficient. Without these four subjects' WFPS score, the correlation coefficient rose more than 10 points to .543. This second treatment of the WFPS using the Pearson correlation coefficient provides even stronger reliability to the second hypothesis concerning performance achievement of students with prior instrumental music experience. The third hypothesis found that students with previous instrumental music experience perform better than 66% of students without instrumental music experience. This data and research from the previous chapters will be discussed in Chapter V.

## CHAPTER V

### CONCLUSION

Because the recruitment process is vital in attracting students for instrumental music and maintaining a successful music program, the researcher investigated the use of a predictive tool (IMS) in the recruitment process. This tool was designed to assist the music educator in identifying students who possess skills necessary for success in instrumental music. Recent studies suggest an effect of the selected recruiting strategies on beginning instrumentalists' participation. Many students may not be attracted to an invitation to begin instrumental music activities because they were uncertain about the caliber of their musical abilities (Nierman and Veak, 1997). Discussed in this chapter will be the results of the research, variables that may have influenced the data, possible implications of this study and topics for further study.

#### Results of the Research

The goal of this research was to determine if the researcher designed Instrumental Music Survey (IMS) is a valid predictor of student success in instrumental music. The pretest-posttest design used the IMS as the pretest, and the Watkins-Farnum Performance Scale A (WFPS) as the posttest. As the WFPS and IMS results are interpreted in a parametric manner, the statistical tests used for this research measure parametric data. The ancillary goal of this research was to determine if the IMS is reliable as a prognostic tool, which will be discussed first.

Though the IMS is titled as a "survey", the results of this survey are given in a parametric manner. The IMS provides a parametric measure of a student's aural musical ability. Since the researcher was the only evaluator of the subjects' WFPS, the researcher wanted to avoid any sort of researcher bias that could have occurred in the evaluation of

the subjects' WFPS scores. To validate the reliability of the researcher's evaluation of the WFPS, two impartial music educators reviewed 10 randomly chosen subjects who took the WFPS. Using the Pearson Correlation Coefficient to determine the reliability of the objectiveness of the researcher's scoring of the WFPS, the reliability was found to be .9684. This correlation suggests a very strong relationship of the researcher's scoring of the WFPS to those of two impartial music educators. The correlation coefficient always lies between  $-1$  and  $+1$ . If a correlation coefficient of  $r = 0$ , then no relationship exists (Crow, Davis, and Maxfield, 1960).

To determine the reliability of the IMS, the researcher used two statistical tests, Kuder Richardson 21 (KR 21) and the Spearman-Brown correlation coefficient (SB). The first test, Kuder Richardson 21 formula, found the IMS to have a reliability of .767. A score over .7 demonstrates a high level of reliability. Later, the researcher discovered that the KR 21 does not effectively measure the internal reliability of tests that are not dichotomous such as the IMS and the WFPS. Many statistical tests assume that the test questions are equal in difficulty. Then the researcher used the Spearman Brown correlation coefficient (SB). The SB found the internal reliability of the IMS as .745. This score indicates that the reliability of the IMS is strong. Again, a score higher than .7 is a good indicator of reliability.

The primary hypothesis concerning the validity of the IMS' use as a predictive test for students in instrumental music was analyzed. Given the pretest and posttest research design, the most common statistical test to use would be a two-tailed t-test to determine the significance of the relationship between the subjects' scores on the IMS and WFPS. Yet, the dichotomous nature of the IMS and WFPS required that a different measure of reliability be found. However, the progressive nature of the IMS and WFPS dictated that a more effective tool for measuring these variances would be the Pearson

correlation coefficient. A correlation coefficient can be used as a measure of reliability. Using the Pearson correlation coefficient, the researcher found the correlation coefficient to be .427. This score indicates the relationship between the scores of the IMS and WFPS to be a positive relationship. Because of the nature of these tests, this is a pretty strong indicator that the IMS is a good predictor of student success in instrumental music. It shows strong predictive qualities. This score over .4 indicates a good relationship. Typically a correlation coefficient score higher .4 would indicate the strength of this relationship, yet because of the nature of this test, a correlation coefficient score of .4 is considered good. This means that the IMS was successful in predicting student success in instrumental music.

The four lowest subjects' scores on the WFPS intrigued the researcher. The majority of subjects' scores had a mean range of 20 to 30 points. These four subjects' scores had a range larger than 55 points. It was a concern that these four scores may disturb the mean range of scores of the IMS and WFPS. The Pearson correlation coefficient computes the relationship of the test scores using the mean range of test score variances. If a few subject scores are too extreme, it may have an adverse effect on the mean range of scores. Though the researcher realizes that the subjects' data should be analyzed as a whole, the researcher was interested in using the Pearson correlation coefficient without the four subjects' scores. The Pearson correlation coefficient was found to be .543 without the four lowest scores. For the Pearson correlation coefficient to leap 10 points demonstrates even more strongly the positive relationship between the IMS and WFPS. For these four subjects, speculations could be made concerning the subjects' instrument choice as physical characteristics, or desire to play the instrument they studied.

The third hypothesis analyzed if students with previous instrumental music

experience would score higher than students without instrumental music experience. Using an effect size formula to determine if a relationship exists between these two groups, the researcher found that students with previous instrumental music experience were more likely to out perform their peers without prior musical training. The score of the effect size .446 demonstrates that students with previous instrumental music experience would be more likely to be successful in instrumental music. This effect size suggests that average student with previous instrumental music experience would be able to perform better than at least 66% of the students without previous instrumental music experience. This may also suggest that students who have experienced success in one area of instrumental music may be more likely to participate in another area.

#### Contributing Factors

Most music educators would argue that even if a student has potential in instrumental music, the student might not be successful because of outside contributing factors. Although the IMS appears to be an effective predictor of students' success in instrumental music, other factors exist which may effect a student's success. Some of these factors may have effected these four subjects Though the entire data set was computed, the researcher found it interesting that omitting only four scores would cause the correlation coefficient to rise by 10 points. These subjects' scores may have been effected by their choice of instrument, meaning that the student may have been playing an instrument that was unsuitable because of embouchure, or other physical characteristics. Some instruments such as the trombone, French horn, for example, require that the student have a fine sense of pitch, and be able to replicate it on the instrument. Perhaps the instruments that the students were playing were not their first choice; therefore the students were not as interested in becoming successful.

Many of the subjects' scored significantly lower on the WFPS than on the IMS.

Several factors may have adversely or positively effected the student's success in instrumental music. Despite a student's demonstration of high musical ability as demonstrated through aural skills, instrumental music requires home practice. Success on an instrument is nearly impossible without practice outside of the classroom. The administration of the WFPS was at the end of the school year; students may have lost interest in practicing at home. Some students who have had previous successful musical experiences may have been positively influenced by their musical experiences.

It is imperative that the researcher address that learning a musical instrument requires the definition of fine motor skills, not just aural skills. Though a student may have the potential (aural musical skills) to be successful in instrumental music, the student must make an effort to practice his/her instrument. Without home practice, success on a musical instrument is nearly impossible.

The data was collected during the final two weeks of the scholastic year to avoid conflict with area concerts, graduation ceremonies, and other concerts. Students may have scored higher if the researcher had collected data earlier in the fourth quarter. However, it is less likely that permission from the cooperating principals and music educators to conduct this study would have been granted.

Data from this study may have been effected by the OPS student body as it has much diversity in terms of socioeconomic status, and family structure. These variables may contribute to the student's success in instrumental music (Klinedist, 1991). Or this could be used as an argument of the validity of this research as the subjects come from a diverse background.

#### Topics for Further Study

To truly investigate the success of the IMS as a predictor of student success, the

researcher would like to further explore this study as a longitudinal research with a larger sample size. Further research in this area could investigate the retention of these students who have shown their potential for success in instrumental music as demonstrated by their scores on the IMS. Edwin E. Gordon completed research concerning instrumental music students in an urban school district, who came from culturally-disadvantaged and culturally-heterogeneous backgrounds. Gordon's research found that students from the culturally-disadvantaged backgrounds performed as well as students from culturally-heterogeneous backgrounds because the music educators taught to the students' individual differences as an integral part of the group lessons (Gordon, 1975).

#### Summary

This research suggests that the researcher designed Instrumental Music Survey (IMS, 1999) can be a valid predictor of student success in instrumental music. This study completed in the Omaha Public School District, Omaha, Nebraska, used subjects whose background varied in terms socioeconomic, race, urban, and suburban areas. The first hypothesis examined the reliability of the IMS. Using the Spearman Brown reliability formula, reliability of the IMS was found to be .734. Using the Watkins-Farnum Performance Scale (WFPS, 1954) as a measure of the student's success in instrumental music, the researcher found that a good correlation exists between the students' scores on the IMS and WFPS. This correlation coefficient was found using Pearson correlation coefficient, and determined the coefficient was .427. An ancillary hypothesis analyzed if previous instrumental music experience is a good predictor of success in another area of instrumental music. Using an effect size formula, the researcher found that students with



previous instrumental music would perform better than 66% of students without instrumental music experience. Factors exist which may prevent the student's success on an instrument such as; 1) the student's physical characteristics are incorrect for the instrument, 2) parental support for the student's success in instrumental music, and 3) the student's motivation to become successful in instrumental music.

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Appendix A  
Instrumental Music Survey

# Elementary Music Survey

1 Pitch Discrimination

Example 1 1) 2) 3) 4) 5) 6) 7)

Detailed description: A single musical staff in treble clef with a key signature of one flat (Bb). It contains seven measures of music, each starting with a different pitch. The notes are: 1) G4, 2) F4, 3) E4, 4) D4, 5) C4, 6) B3, 7) A3.

8

8) 9) 10) 11) 12) 13) 14) 15)

Detailed description: A single musical staff in bass clef with a key signature of one flat (Bb). It contains eight measures of music, each starting with a different pitch. The notes are: 8) G3, 9) F3, 10) E3, 11) D3, 12) C3, 13) B2, 14) A2, 15) G2.

17 Rhythmic Discrimination

Example 2 A 2 B 1)A 1)B 2)A 2)B 3)A 3)B

Detailed description: A single musical staff in treble clef with a key signature of one flat (Bb). It contains eight measures of music, each starting with a different rhythm. The rhythms are: 1) A quarter note, 2) a half note, 3) a dotted quarter note, 4) an eighth note, 5) a sixteenth note, 6) a dotted eighth note, 7) a sixteenth note, 8) a quarter note.

25

4)A 4)B 5)A 5)B 6)A 6)B 7)A 7)B

Detailed description: A single musical staff in treble clef with a key signature of one flat (Bb). It contains eight measures of music, each starting with a different rhythm. The rhythms are: 4) A quarter note, 4) B a half note, 5) A a dotted quarter note, 5) B an eighth note, 6) A a sixteenth note, 6) B a dotted eighth note, 7) A a sixteenth note, 7) B a quarter note.

33

8)A 8)B 9)A 9)B 10)A 10)B 11)A 11)B

Detailed description: A single musical staff in treble clef with a key signature of one flat (Bb). It contains eight measures of music, each starting with a different rhythm. The rhythms are: 8) A quarter note, 8) B a half note, 9) A a dotted quarter note, 9) B an eighth note, 10) A a sixteenth note, 10) B a dotted eighth note, 11) A a sixteenth note, 11) B a quarter note.

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12) A 12)B 13)A 13)B 14)A 14)B 15)A 15)B

Detailed description: A single musical staff in treble clef with a key signature of one flat (Bb). It contains eight measures of music, each starting with a different rhythm. The rhythms are: 12) A quarter note, 12) B a half note, 13) A a dotted quarter note, 13) B an eighth note, 14) A a sixteenth note, 14) B a dotted eighth note, 15) A a sixteenth note, 15) B a quarter note.

49 Melodic Discrimination

Example 3)A 5)B 1)A 1)B 2)A 2)B 3)A 3)B

Detailed description: A single musical staff in treble clef with a key signature of one flat (Bb). It contains eight measures of music, each starting with a different melody. The melodies are: 1) A quarter note, 1) B a half note, 2) A a dotted quarter note, 2) B an eighth note, 3) A a sixteenth note, 3) B a dotted eighth note, 4) A a sixteenth note, 4) B a quarter note.

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4)A      4)B      5)A      5)B      6)A      6)B      7)A      7)B

65

8)A      8)B      9)A      9)B      10)A      10)B

**INSTRUMENTAL MUSIC SURVEY**

NAME \_\_\_\_\_ SCHOOL \_\_\_\_\_  
(FIRST LAST)

GRADE \_\_\_\_\_ ROOM NO. \_\_\_\_\_ DATE \_\_\_\_\_

**BRIEF HISTORY:**

1. Would you like to learn to play a musical instrument? Yes \_\_\_\_\_ No \_\_\_\_\_
2. If yes, what instrument would you like to play?  
 (Name 2 choices)  
 a. \_\_\_\_\_  
 b. \_\_\_\_\_
3. Does any member of your family play an instrument? Yes \_\_\_\_\_ No \_\_\_\_\_  
 If yes, what instrument(s) \_\_\_\_\_
4. Are there any instruments in the family? Yes \_\_\_\_\_ No \_\_\_\_\_  
 If yes, what instrument(s) \_\_\_\_\_

MUSIC SURVEY								
SECTION 1 = PITCH			SECTION 2 = RHYTHM			SECTION 3 = MELODY		
EXAMPLE 1: S D			EXAMPLE 2: S D			EXAMPLE 3: S D		
1.	S	D	1.	S	D	1	S	D
2.	S	D	2.	S	D	2.	S	D
3.	S	D	3.	S	D	3.	S	D
4.	S	D	4.	S	D	4.	S	D
5.	S	D	5.	S	D	5.	S	D
6.	S	D	6.	S	D	6.	S	D
7.	S	D	7.	S	D	7.	S	D
8.	S	D	8.	S	D	8.	S	D
9.	S	D	9.	S	D	9.	S	D
10.	S	D	10.	S	D	10.	S	D
11.	S	D	11.	S	D			
12.	S	D	12.	S	D			
13.	S	D	13.	S	D			
14.	S	D	14.	S	D			
15.	S	D	15.	S	D			

SCORE \_\_\_\_\_

- I. CLASSROOM TEACHER RECOMMENDATION:  
 READING: **ABOVE** grade level \_\_\_\_\_ **AT** grade level \_\_\_\_\_ **BELOW** grade level \_\_\_\_\_  
 FOLLOWS DIRECTIONS? YES \_\_\_\_\_ NO \_\_\_\_\_
- II. Instrumental music teacher recommendation: \_\_\_\_\_ INSTRUMENT: \_\_\_\_\_



### INSTRUMENTAL MUSIC SURVEY: Answer Sheet

NAME \_\_\_\_\_ SCHOOL \_\_\_\_\_  
(FIRST LAST)

GRADE \_\_\_\_\_ ROOM NO. \_\_\_\_\_ DATE \_\_\_\_\_

#### BRIEF HISTORY:

1. Would you like to learn to play a musical instrument? Yes \_\_\_\_\_ No \_\_\_\_\_
2. If yes, what instrument would you like to play? What instrument would you like to play?  
 (Name 2 choices)  
 a. \_\_\_\_\_  
 b. \_\_\_\_\_
3. Does any member of your family play an instrument? Yes \_\_\_\_\_ No \_\_\_\_\_  
 If yes, what instrument(s) \_\_\_\_\_
4. Are there any instruments in the family? Yes \_\_\_\_\_ No \_\_\_\_\_  
 If yes, what instrument(s) \_\_\_\_\_

MUSIC SURVEY								
SECTION 1 = PITCH			SECTION 2 = RHYTHM			SECTION 3 = MELODY		
<i>EXAMPLE 1:</i> S (D)			<i>EXAMPLE 2:</i> S (D)			<i>EXAMPLE 3:</i> S (D)		
1.	S	(D)	1.	S	(D)	1.	S	(D)
2.	(S)	D	2.	(S)	D	2.	S	(D)
3.	S	(D)	3.	S	(D)	3.	S	(D)
4.	S	(D)	4.	S	(D)	4.	S	(D)
5.	(S)	D	5.	S	(D)	5.	(S)	D
6.	S	(D)	6.	S	(D)	6.	(S)	D
7.	(S)	D	7.	S	(D)	7.	S	(D)
8.	S	(D)	8.	(S)	D	8.	S	(D)
9.	S	(D)	9.	S	(D)	9.	S	(D)
10.	(S)	D	10.	S	(D)	10.	S	(D)
11.	(S)	D	11.	S	(D)			
12.	(S)	D	12.	S	(D)			
13.	S	(D)	13.	(S)	D			
14.	(S)	D	14.	S	(D)			
15.	(S)	D	15.	(S)	D			

#### SCORE \_\_\_\_\_

#### 1. CLASSROOM TEACHER RECOMMENDATION:

READING: **ABOVE** grade level \_\_\_\_\_ **AT** grade level \_\_\_\_\_ **BELOW** grade level \_\_\_\_\_  
 FOLLOWS DIRECTIONS? YES \_\_\_\_\_ NO \_\_\_\_\_

III. Instrumental music teacher recommendation: \_\_\_\_\_ INSTRUMENT \_\_\_\_\_

## Recommendation Letter - English

\_\_\_\_\_  
Name of Student

Dear Parent or Guardian,

During the first week of school, the instrumental music staff visited your child's school and introduced students to the instrumental music program.

During this presentation, the instruments taught in the Omaha Public School District were presented and discussed. A short music survey was given to determine a student's readiness for instrumental music. This survey measured the student's listening skills in these areas: pitch, rhythm, and melody recognition. His/her survey is only one element in determining a student's readiness for instrumental music. Other elements include the student's interest, and the student's development of time management skills.

On the basis of this survey, we believe that \_\_\_\_\_ can be successful in instrumental music. We strongly encourage your child to participate.

The instrumental music teacher will be at \_\_\_\_\_ on cycle days \_\_\_\_\_.

Sincerely,

\_\_\_\_\_  
Music Teacher

## Recommendation Letter - Spanish

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Nombre de estudiante

Saludos Padres,

En la primera semana de escuela, los maestros de música instrumental visitaron la clase de su estudiante para presentar los instrumentos que pueden aprender los niños.

Durante esta presentación, los estudiantes contestaron una pregunta para saber si están listos para comenzar lecciones de música instrumental. Esta pregunta trataba de ver si los niños pueden distinguir diferencias entre dos tonos, ritmos, y melodías. El estudiante que tiene entusiasmo para enseñarse un instrumento también tiene que cumplir con el trabajo de la clase.

El resultado es que pensamos que \_\_\_\_\_ podría ser un estudiante de música instrumental.

Los maestros de música instrumental estarán en \_\_\_\_\_ en los días \_\_\_\_\_.

Sinceramente,

---

Maestro

## General Interest Letter English

Dear Parent,

During the first week of school, the instrumental music staff visited your child's school and informed students about the instrumental music program. Your child expressed an interest in learning to play an instrument and we are anxious to introduce him/her to the exciting experience of music performance.

In our music classes we teach boys and girls how to play an instrument, read music and so much more. We feel that instrumental music students acquire a special type of pride and confidence in group performance. Our middle school and high school students tell us that they have acquired not only a rich appreciation for music, but also the lasting friendships of many other young musicians who enjoy active participation in wholesome school activities.

Learning to play an instrument is not difficult, but it does require interest, practice and parental encouragement. With your help and support your child can be performing in a concert later this year and -- in not so many more years -- performing in a middle school orchestra. Your child has been given a detailed brochure of our instrumental program. I encourage you to complete and return the brochure so we can work together in bringing instrumental music into your child's life.

Yours truly,

---

(Instrumental Music Teacher)

General Interest letter – Spanish

Saludos Padres,

En la primera semana de escuela, los maestros de la música instrumental visitaron la clase de su estudiante para presentar los instrumentos que pueden aprender los niños. Su niño enseña interés en aprender un instrumento.

En las clases de banda o orquesta, los estudiantes se enseñan como tocar el instrumento, como leer las notas y mucho más. Se requiere que el estudiante tenga interés, que practiqué y que reciban el apoyo de la familia.

Animen a su estudiante con su interés en la música instrumental.

Sinceramente,

---

Maestro(a)

## Appendix B

### Watkins-Farnum Performance Scale: Form A

# WATKINS-FARNUM PERFORMANCE SCALE

## FORM A

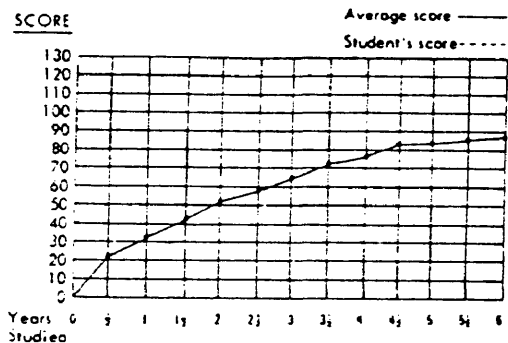
### Score Sheet For Flute

Name ..... Date .....

Instrument ..... Years Studied .....

School ..... Grade ..... Age .....

#### PROGRESS CHART



#### SCORING SUMMARY

(Student's score is "possible score" less errors.)

Ex.	1.	Possible score	13	Errors	Score
	2.	"	"	10	"
	3.	"	"	10	"
	4.	"	"	10	"
	5.	"	"	10	"
	6.	"	"	10	"
	7.	"	"	10	"
	8.	"	"	10	"
	9.	"	"	10	"
	10.	"	"	10	"
	11.	"	"	10	"
	12.	"	"	8	"
	13.	"	"	8	"
	14.	"	"	10	"

GRADE  TOTAL SCORE

Remarks .....

#### GRADING CHART

GRADES FOR FLUTES												
Years	1	1	1	2	2	3	3	4	4	5	5	6
A	35	50	62	70	77	83	88	90	92	94	96	98
B	25	40	48	55	61	66	70	74	78	82	84	86
C	15	30	35	40	45	50	54	58	62	65	67	69
D	5	15	25	30	35	40	44	47	50	52	54	56

Sample—At the end of one year if the score of a flute player is 50 or higher the grade will be A.  
 At the end of three years a score of between 60 and 82 will earn a B grade.

- Errors may be indicated in two ways:
1. Draw a cross through the incorrect measure.
  2. Indicate the type of error by using the symbols on page 4 and 5.

Pitch	P	Change of tempo	T
Time	P	Expression	E
Stacc.	S	Holds or pauses	R
Rest.	R	Repeats	∞

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Test begins here. Check only one error per measure.

#### WATKINS-FARNUM PERFORMANCE SCALE EXERCISES

Tempo ♩ = 78

Tempo ♩ = 100

*p*

Tempo ♩ = 118

*mf*

Tempo ♩ = 120

Tempo ♩ = 83

Tempo ♩ = 100

Tempo ♩ = 133

Tempo ♩ = 100

Tempo ♩ = 80

*rit.* *allegro*



Appendix C  
IRB Approval



Institutional Review Board (IRB)  
Office of Regulatory Affairs (ORA)  
University of Nebraska Medical Center  
Service Building 3000  
987830 Nebraska Medical Center  
Omaha, NE 68198-7830  
(402) 559-6463  
Fax: (402) 559-3300  
E-mail: [irbora@unmc.edu](mailto:irbora@unmc.edu)  
<http://www.unmc.edu/irb>

May 11, 2001

Victoria Van Beusekom  
King Science Center  
3720 Florence Blvd  
Omaha, NE 68114  
UNO -

IRB # 184-01-EP

TITLE OF PROPOSAL: An Investigation of the Effectiveness of an Instrumental Music Survey as a Recruitment Tool

SECONDARY INVESTIGATORS:

DATE OF FULL BOARD REVIEW \_\_\_\_\_ DATE OF EXPEDITED REVIEW 04-30-01

DATE OF FINAL APPROVAL 05-11-01 VALID UNTIL 04-30-02

EXPEDITED CATEGORY OF REVIEW: 45CFR46.110; 21CFR56.110, Category 7

The Institutional Review Board (IRB) for the Protection of Human Subjects has completed its review of the above-titled protocol and informed consent document(s), including any revised material submitted in response to the IRB's review. The Board has expressed its opinion that you are in compliance with HHS Regulations (45 CFR 46) and applicable FDA Regulations (21 CFR 50.56) and you have provided adequate safeguards for protecting the rights and welfare of the subjects to be involved in this study. The IRB has, therefore, granted unconditional approval of your research project. This letter constitutes official notification of the final approval and release of your project by the IRB, and you are authorized to implement this study as of the above date of final approval.

Please be advised that only the IRB approved and stamped consent/assent form can be used to make copies to enroll subjects. Also, at the time of consent all subjects/representatives must be given a copy of the rights of research participants. The IRB wishes to remind you that the PI or Co-PI, is responsible for ensuring that ethically and legally effective informed consent has been obtained from all research subjects.

Finally, under the provisions of this institution's Multiple Project Assurance (MPA #1509), the PI/Co-PI is directly responsible for submitting to the IRB any proposed change in the research or the consent document(s). In addition, any unanticipated adverse events involving risk to the subject or others must be promptly reported to the IRB. This project is subject to periodic review and surveillance by the IRB and, as part of their surveillance, the IRB may request periodic reports of progress and results. For projects which continue beyond one year, it is the responsibility of the principal investigator to initiate a request to the IRB for continuing review and update of the research project.

Sincerely,

*Ernest D. Prentice, PhD/BCP*  
Ernest D. Prentice, Ph.D.  
Co-Chair, IRB

EDP/gdk

Appendix D  
Parental Consent Letter



Department of Music  
Omaha, Nebraska 68182-0245  
(402) 554-2251

IRB 184-01 EP

Dear Parent/Guardian;

RE: An Investigation of the Effectiveness of an Instrumental Music Survey as a Recruitment Tool.

Your child has been invited to participate in a study involving instrumental music. The purpose of this study is to determine if a specific method of instrumental music recruitment is helpful in aiding the music educator in evaluating and advising students for specific instruments. If you permit your child to participate in this study, s/he will be asked to play a few short musical excerpts from a standardized instrumental music test (Watkins-Farnum Performance Scale, 1954). This test will require only a few minutes of your child's time and will take place during his/her normally scheduled instrumental music lesson. The test will be tape-recorded. These results and results from a music survey administered during the beginning of the school year will determine if this method of recruitment is effective in identifying potentially successful students for instrumental music.

There are no known risks associated with this study. If the results of this survey are valid, this information may be used in the future for recruitment of instrumental music students. Any information specific to individual students garnered will be kept confidential. You are making a decision whether or not to allow your child to participate in this study.

Participation in this study is voluntary. If you decide to allow your child to participate, your child is free to withdraw at anytime.

If you have any questions, please feel free to contact my thesis advisor, Dr. James Saker, Department of Music University of Nebraska at Omaha or myself. I thank you in advance for your cooperation.

PLEASE RESPOND NO LATER THAN MAY 18, 2001

Yes, my child \_\_\_\_\_ has permission to participate in this study.

No, my child \_\_\_\_\_ will be unable to participate in this study.

Child Signature \_\_\_\_\_

Child Printed Name \_\_\_\_\_

Parent/Guardian Signature \_\_\_\_\_

Sincerely,

Victoria Van Beusekom  
557-3720  
vanbeuv1@ops.org

Dr. James Saker  
554-3446  
jimsaker@unomaha.edu

APPROVED

University of Nebraska at Omaha

University of Nebraska Medical Center

University of Nebraska-Lincoln

University of Nebraska

IRB APPROVED  
VALID UNTIL 4/30/02

Appendix E

OPS Research Review Committee Approval



DIVISION OF RESEARCH

3215 CUMING STREET OMAHA, NEBRASKA 68131-2080 (402) 557-2120 FAX: (402) 557-2049

April 11, 2001

Victoria Van Beusekom  
6029 Manderson St.  
Omaha, NE 68104

Dear Victoria:

The Research Review Committee has reviewed your research proposal that involves the collection of data from students, teachers, and administrators through processes such as the examination and/or collection of information from files or records, direct observation, focus groups, or individual interviews.

We believe your study has merit and permission is granted for you to proceed under the following conditions:

- Principals agree to your study.
- Principals in affected buildings agree to your study.
- In the reporting of the data, neither students nor schools will be personally identifiable.
- You will be willing to share results of your study with OPS.

The Research Review Committee also studied the sample recommendation and general interest letters. The committee thought that the letters in Spanish were not exact translations of the English letters and that the English letters were more encouraging and inviting than the Spanish ones. Also you may consider letters in Nuer for the Sudanese children.

Another concern of the committee was on page 3 of the Instrumental Music Survey itself. The last sentence states, "It is the instrumental music . . . who receives a school instrument." The committee hopes that a set criteria has been established for these decisions.

Best wishes.

Sincerely,

A handwritten signature in cursive script, appearing to read "Virginia Brown".

Dr. Virginia Brown, Ph.D  
Instructional Research Administrator

VB/JB

CC: Steve Lawrence