# A study of jazz band participation by gender in secondary high school instrumental music programs 

Douglas Penn Barber<br>Rowan University

Follow this and additional works at: https://rdw.rowan.edu/etd
Part of the Secondary Education and Teaching Commons

## Recommended Citation

Barber, Douglas Penn, "A study of jazz band participation by gender in secondary high school instrumental music programs" (1998). Theses and Dissertations. 1911.
https://rdw.rowan.edu/etd/1911

This Thesis is brought to you for free and open access by Rowan Digital Works. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Rowan Digital Works. For more information, please contact graduateresearch@rowan.edu.

# A STUDY OF JAZZ BAND PARTICIPATION BY GENDER 

IN SECONDARY HIGH SCHOOL INSTRUMENTAL
MUSIC PROGRAMS
by
Douglas Penn Barber

## A Thesis

Submitted in partial fulfillment of the requirements of the Master of Arts Degree in Subject Matter Teaching: Music in the Graduate division of Rowan University

1998

Approved by
Date Approved $1 /(\operatorname{ly}), 44$

# ABSTRACT <br> Douglas Penn Barber <br> A STUDY OF JAZZ BAND PARTICIPATION BY GENDER IN SECONDARY HIGH SCHOOL INSTRUMENTAL MUSIC PROGRAMS 

1998
Lili M. Levinowitz, Ph. D.
Master of Arts in Subject Matter Teaching: Music

The purpose of this study was to determine if a gender inequity exists in student participation in high school jazz band.

The sample for this study consisted of students involved in the instrumental programs of high schools in South Jersey. A survey was generated by the researcher to collect data on participation. Sixty-eight surveys were mailed and forty-three were returned.

Data were converted to percentages and compared by instrument for participation in the overall program and the jazz program.

On the basis of these data there is a gender inequity in the participation of jazz band. The difference is a result of instrument selection. Females that participate on jazz band eligible instruments are as likely to be members of the jazz band as their male counterparts.

## MINI-ABSTRACT

# Douglas Penn Barber <br> A STUDY OF JAZZ BAND PARTICIPATION BY GENDER IN SECONDARY HIGH SCHOOL INSTRUMENTAL MUSIC PROGRAMS 

1998

Lili M. Levinowitz, Ph. D.
Master of Arts in Subject Matter Teaching: Music

The purpose of this study was to determine if a gender inequity exists in student participation in high school jazz band.

A substantial gender inequity was found to exist in the programs of South Jersey. The inequity is a result of instrument selection. Females that participate on jazz band eligible instruments are as likely to be members of the jazz band as their male counterparts.

## TABLE OF CONTENTS

LIST OF TABLES ..... iii
ACKNOWLEDGEMENTS ..... iv
CHAPTER

1. INTRODUCTION ..... 1
Purpose ..... 8
Statement of the Problem ..... 8
2. REVIEW OF THE LITERATURE ..... 9
Introduction ..... 9
Fortney, Boyle and Decarbo ..... 9
Abeles and Porter ..... 12
3. PROCEDURES AND ANALYSIS ..... 17
Sample ..... 17
Procedures and Analysis ..... 17
4. PRESENTATION AND ANALYSIS ..... 19
Analysis ..... 19
Interpretations ..... 26
5. SUMMARY AND CONCLUSIONS ..... 28
Purpose and problems of the study ..... 28
Design and Analysis ..... 28
Results of the Study ..... 30
Conclusions and recommendations ..... 30
APPENDIX ..... 32
BIBLIOGRAPHY ..... 35
LIST OF TABLES
6. Chart 1 All students by gender ..... 19
7. Chart 2 Students involved in jazz band by gender ..... 20
8. Table 3 All students by instrument ..... 21
9. Chart 3 All students by instrument ..... 22
10. Table 4 Students involved in jazz band by instrument ..... 23
11. Chart 4 Students involved in jazz band by instrument ..... 24
12. Chart 5 Percentages of wind instrument participation ..... 25

## ACKNOWLEDGEMENTS

The author of this study would like to thank the many contributors to this work.

He especially would like to thank the following:
All of the jazz band directors who took the time to complete the survey and showed genuine interest and concern for the problems at hand.

Dr. Levinowitz for her special gift of knowing when to motivate and when to be patient.

The author would also like to thank his wife, Cindy, for her unconditional support of this project (and it's author) and his two sons, Grady, who gave up too many bedtime stories and Charlie, who was born three weeks prior to the deadline.

## CHAPTER ONE

## INTRODUCTION

It is imperative that educators in public schools ensure that equal educational opportunities are available to all students. As the jazz band program has become an integral part of high school music departments in the last 25 years ${ }^{1}$, it is important to ascertain that music educators are aware of inequities within the makeup of their program if they are found to exist. Findings of educational research which suggest the probability of a gender inequity in jazz ensemble participation at the secondary level are as follows: a lack of female role models, an imbalance in the selection of jazz instruments, a parental stereotyping of instrument appropriateness for gender, and a gender related difference in style preference.

Accepting the statements 2 "Sex role definitions can be learned from role models including people presented in the

```
1 Lawn, Richard 1981. The Jazz Ensemble Director's Handbook. Oskaloosa, Iowa: C.L. Barnhouse.
```

2 Purcell, Piper and Lara Stewart, "Dick and Jane in 1989." In Readings and Cases in Educational Psychology, ed. Anita E. Woolfolk, (Boston: Allen and Bacon, 1993), 93.
media" and "sex roles are learned behaviors and are not solely biologically defined" from the research of Purcell and Stewart (1989), the lack of female role models in the field of jazz should serve as a detriment to females pursuing education in jazz. 3 "At least 95\% of modern-day large ensemble jazz playing comes out of three traditions: Count Basie's band, Duke Ellington's band and the orchestration of small groups" states David Berger in his liner notes to the 1997 educational package from the Jazz at Lincoln Center library. In the long history of the Duke Ellington Orchestra and that of the Count Basie band, a role model for female instrumentalists has not been available. In addition to a lack of real life role models a gender bias exists in the over utilization of passive roles portrayed by females in textbook examples. A study of females pictured in music textbooks demonstrates this deficiency as only one activity and few instruments meeting an equity criterion of $50 \%$ (Koza 1994). 4

Joanne Brackeen, a female member of the jazz ensemble led by drummer Art Blakey, the Jazz Messengers, stated when asked about her role as a woman jazz musician,5 "I didn't even know that there weren't really any women jazz 3 Berger, David. Notes from score, In a Mellow Tone by Duke Ellington (Miami: Warner Brothers, 1996).

4 Koza, Julia Eklund. "Females in 1988 Middle School Textbooks: An Analysis of Illustrations." Journal of Research in Music Education, 42 (1994), 145-171.

5 Sheridan, Margaret, "Joanne Sets the Pace in Women's Jazz World," South China Morning Herald , 13 October 1992, reproduced and translated on the Joanne Brackeen WWW site.
instrumentalists. It never occurred to me that there wouldn't be. I played in it for the music, I liked the music and it was interesting. I never really thought about a little detail like that." The lack of role models for females in the field of professional jazz requires of prospective female musicians additional strategies as well as unique personality traits to overcome stereotypes for performance reducing the likelihood that female musicians will achieve on an equal level their male counterparts.

The International Association of Jazz Educators has established a Women's Caucus to provide a forum for the exploration of women' issues in jazz education. The program Sisters in Jazz established the Michigan Mentoring Pilot Program to attempt to "change the direction of females who are playing in great numbers, sitting first chair and are clearly interested in music in middle school" but are not appearing at the university level. 6

An equal representation of females in jazz programs will indicate that females in addition to males are receiving the educational benefits of jazz band membership. Students who participate in jazz band develop a stronger sense of individuality, independence, and responsibility as well as the musical outcomes of strong reinforcement in the areas of sight reading, rhythmic understanding, intonation, leadership through part independence, balance and blend. 7 Research 6 Hayden, Marion, Diana Spradling and Sunny Wilkinson. "Sisters in Jazz," Jazz Educators Journal , 30 (1997), 42-45.

7 Lawn, Richard 1981. The Jazz Ensemble Director's Handbook. (Oskaloosa, Iowa: C.L. Barnhouse) p. 1.
relating to musical preference in relationship to gender indicates the existence of gender association with differing styles of musical expression. In a study of college students Farnsworth (1960) requested students to indicate masculine/feminine associations in relation to various musical styles. The students in the study identified classical music as being feminine in nature and jazz music was found to be masculine. 8 In a study of British secondary school students Hargreaves, Comber and Colley discovered that females of any age express a more positive attitude toward music in general but dislike for jazz music was demonstrated more by females than by males. 9 May (1985) obtained preference ratings for 24 recorded pieces from students in the primary grades. Among his findings May found one of the styles that boys demonstrated higher ratings for preference was bebop. Males were shown to prefer music with higher levels of dynamic contrast more frequently than females. 10

There exists a significant amount of research into gender participation in school band programs and the gender association to specific instruments. Using the High School and Beyond data set, which documented over 50,000 responses, 8 Farnsworth, P. The effects of role taking on artistic achievement. Journal of Aesthetics and Art Criticism , 18, (1960), 345-49.

9 Hargreaves, David J., Chris Comber and Ann Colley. "Effects of age, gender and training on musical preferences of British secondary school students, Journal of Research in Music Education, 43, (1995), 242-250.

10 May, w. V. "Musical style preferences and aural discrimination skills of primary grade school children." Journal of Research in Music Education, 32, (1985), 7-22.

Dwinell and Hogrebe (1984) determined that an equal number of participants in high school band and orchestra was found for each gender. 11 Equity in overall participation has not translated into an equal distribution of each gender to the individual instruments. Instrument selection is a process which appears to be influenced by gender to instrument stereotyping. In a four part study Abeles and Porter (1978) found that parents asked to hypothetically choose instruments for sons and daughters showed a significant difference (<.05) due to the sex of the child. Flute, clarinet and violin were most frequently selected for daughters and trumpet, trombone and drums were most frequently selected for sons. Cello and saxophone demonstrated a neutral response. 12 In a subsequent segment of the Abeles and Porter (1978) study college students were asked to rate the same eight instruments using a paired comparison strategy on a masculine/feminine continuum. In agreement with the first step of the process femininity demonstrated a high correlation with flute,clarinet and violin while trumpet trombone, and drums showed a high correlation with masculinity. Abeles and Porter included a statement in their landmark study that is relevant to the research proposed here:

11 Dwinell, Patricia L. and Mark C. Hogrebe, Differences among ability groups in participation in the performing arts at the high school level, Paper presented at the annual meeting of the American Educational Research Association, New Orleans, La., April 1984, ERIC ED 247215.

12 Abeles, H. F. and S.Y. Porter. "The sex stereotyping of musical instruments", Journal of Research in Music Education, 26, (1978), 65-75.

13Stereotyping is particularly a problem when it is based on characteristics irrelevant to the function of a group of objects such as the association of females with playing the violin and maleness with playing the drums. The sexstereotyping of musical instruments, therefore tends to limit the range of musical experiences available to male and female musicians in several ways including participation in instrumental ensemble and selection of vocation in instrumental music.

In a study for difference in instrument preference using the same eight instruments that Abeles and Porter utilized, Delzell and Leppla (1992), using pictures of the instruments, found boys preferring drums, saxophone and trombone and girls preferring flute, clarinet, and violin. 14 Fortney, Boyle and DeCarbo in their study of 990 sixth through ninth grade students indicate that gender association strongly influences the decision to play an instrument. 15 In a study of parents of school age children a strong gender to instrument

13 Abeles, H. F. and S.Y. Porter. "The sex stereotyping of musical instruments", Journal of Research in Music Education, 26, (1978), 66.

14 Delzell, J.K., and D.A. Lappla. "Gender association of musical instruments and preferences of fourth-grade students for selected instruments, Journal of Research in Music Education, 40, (1992), 93-103.

15 Fortney, Patrick M., J. David Boyle and Nicholas J. DeCarbo. "A study of middle school band students' instrument choices'" Journal of Research in Music Education, 43, (1995), 242-250.
relationship was demonstrated. Zervoudeakes and Tanur indicate in their study that there is a continuation of sex specific segregation on the high school level, but there is no indication that this is happening in the elementary level. 16

In studies that examined improvisational ability considering gender both Bash and Madura found gender to be a poor predictor of success. The study by Bash (1984) tested six variables as predictors for improvisation achievement and found that gender did not serve as a predictor. 17 The Madura (1996) study examined vocal improvisation achievement among College aged vocal majors and found gender to not be a relevant predictor of success. 18

[^0]Problem: To determine the gender makeup of the high school jazz band program in relation to that of the entire instrumental program.

Purpose: To provide information on the current state of gender equity in jazz participation in South Jersey high schools. If a gender inequity is found, this will indicate the need to develop a process that encourages both genders to participate at an equal level.

CHAPTER TWO

REVIEW OF THE LITERATURE

## Introduction

Although the apparent lack of females in the jazz profession as well as at the university level has been alluded to in educational journals, the subject of female involvement in jazz has not been formally addressed in a research format. More specific to this study there have been no studies concerning female participation in high school jazz band programs. There have been research papers written on the closely related subjects of instrument choice (Fortney, Boyle and DeCarbo, 1995) ${ }^{1}$ and sex stereotyping of instruments (Abeles and Porter, 1978) ${ }^{2}$. These studies will be discussed in this chapter.

## Fortney, Boyle and DeCarbo

The purpose of the research "A Study of Middle School Band Students' Instrument Choices" by Patrick Fortney, David Boyle and Nicholas J. DeCarbo was to investigate the reasons students reported for the selection of their instruments.

```
1 Fortney, Boyle and Decarbo, 242.
```

2
Abeles and Porter, 66.

Citing the importance of instrument selection in the determination of a successful musical experience and considering that a dislike for a selected instrument often leads to student dropout, the researchers sought information to help educators to facilitate better instrument choice based on consideration of sociological, psychological and physiological factors.

The 52 middle schools of Dade County, Florida which was considered by the researchers to be ethnically and socioeconomically diverse, were divided into six regions. The researchers then randomly selected two schools from each region to ensure that the sample was representative of the county. The 13th school included in the study was the pilot school used to test the survey instrument. The survey was a researcher generated, eleven item questionnaire which utilized both open and closed response items. The survey was to be completed and collected during a normal class period by the students in each of the schools. The survey included the following information:

1) Gender
2) Current grade level
3) Instrument played
4) Grade of initial participation
5) Participation in private lessons
6) Instrument private lessons were taken on, if any.
7) Family instrumental participation
8) Student viewing MTV
9) Self reported influences on instrument choice (Using a three point likert type scale)
10) Current instrument choice if starting study now and why.
11) Instrument that would be least favorable to study and why.

The participants received 75 surveys per school and the
return rate was $100 \%$. The researchers used the Anderson Bell (1987) statistics package and cross tabulation procedures were used for analysis. The analyses of chi square values and probabilities were utilized and included in the published study.

The researchers acknowledged the influence of the large number of responses on the reported values for probability but noted that the outcome of all the chi square values being statistically significant at a p<.001 level indicated real differences in response due to gender and instrument. Strong gender to instrument relationships were reported. Over $90 \%$ of the students who played flute were female and $90 \%$ of the students who played trumpet and percussion were male. The majority of students participating in woodwind study were females and male students provided the vast majority of brass players and percussionists. Participation on saxophone was an exception to the extreme gender segregation yet the $70 \%$ male participant statistic still indicated a strong gender association.

The students reported that sound was a strong factor (54\%) in instrument choice. Factors that related to the influence of other people were cited as highly influential. Gender differences in relation to strength of reported influence were found to be significant only in reference to size of instrument (females) and television watching (males). Indications for most and least favored instruments were in close relation to gender associated performance.

## The Abeles and Porter Study

Harold F Abeles and Susan Yank Porter conducted a four part study titled The Sex Stereotyping of Musical Instruments. This landmark study is cited in the vast majority of music educational research when gender is a factor. In the related research section of their study, much evidence is provided concerning the limited role of females in band programs at the University level, in professional ensembles and in the teaching profession. The purpose of this study was to examine the associations of instruments to specific genders.

The study was designed as a four part study in an effort to create a comprehensive picture. Study 1 investigated adult attitudes towards instrument selection for students. Using an equal number of surveys that began with either the statement, "Your fifth grade daughter..." or "Your fifth grade son..." the question gathered data on the following eight instruments in relation to the gender of each child: cello, clarinet, drums, flute, saxophone, trombone, trumpet and violin. Using a Multivariate Analysis of Variance (MANOVA) the average rank of each instrument was analyzed. Using the sex of the hypothetical child, sex of the participant and the presence or absence of an instrumental background, a 2X2X2 factorial design was utilized. Responses indicated that respondents preferred flute, clarinet and violin for daughters and trumpet, trombone and drums for sons. The saxophone and cello demonstrated no significant differences at the .05 level. In the opinion of this researcher, study 1 , by utilizing adults in public school and church setting, may have a bias as it is not a random sample.

This researcher is concerned that the results may have been significantly different had the study been conducted over a more random, less "family centered" population. The request for information on one sex for each survey participant also is a questionable tactic. Without the knowledge of the focus of the survey there is a concern that the participant might be influenced by other factors, such as sex of the survey participant, if the participant interprets the son or daughter reference as a non gender specific child.

Study 2 utilized college undergraduates. A survey instrument asked 32 music majors and 26 non music majors to consider the same eight instruments used in Study 1. Listed in all possible combinations in pairs (28), participants were asked to circle the instrument that they considered to be more masculine in nature. The results were presented as Spearman-Rank Correlation Coefficients of 1.00 between the music majors and the non music majors. The results are as follows with the higher score indicating masculinity:

| Instrument | Normalized Gender Scale Score |
| :--- | :---: |
| Flute | .000 |
| Violin | 1.518 |
| Clarinet | 1.949 |
| Cello | 2.643 |
| Saxophone | 3.182 |
| Trumpet | 3.261 |
| Trombone | 4.143 |
| Drum | 4.195 |
| As in Study 1 the flute, violin, clarinet set are polarized |  |
| against the trumpet, trombone, and drum set with cello and |  |
| saxophone in the middle. |  |
| The data set for Study 3 were 598 children from |  |

kindergarten to fifth grade in Wilmington, Delaware, and Bloomington Indiana. Students were asked to select the instrument they would most like to play. Responses of students who already played an instrument were discarded. Their exposure to the instruments was based on an aural example, the instrument recorded on tape, and a simultaneous visual example, a picture of the instrument being played. The recorded examples all were of the same excerpt played twice, once in the range of the instrument and once around middle C. A pilot study of 232 children showed no statistically differences based on the sex of the administrator or the range of the instrument. A $2 \times 2 \times 3$ (sex by grade by school) randomized block design was used with school used as the blocking variable. Abeles and Porter defined the question being asked by this particular part of their study as "At what age does sex stereotyping begin?" The boys selections remain stable from kindergarten through fifth grade with the variety of selection limited to the masculine side of Study 2 (Table ?). The response of females is more continuous as the grade increases. Although the average selection of the girls indicates a preference towards the feminine side of the scale, there is a wider deviation indicating that females chose from a wider range of instruments than their male counterparts. The researchers report that gender association of instruments is a learned process as it is weak among kindergarten students and becomes more evident beyond grade 3. There is a concern on the part of this researcher that the pictures used to clarify the instruments for the students contained depictions of gender
specific instrumentalists. The instrumentalists were in keeping with the results of Study 2 (males were pictured playing the more "masculine" instruments).

The final segment, Study 4 , used as subjects 47
children from ages three through five from a day care center in Bloomington, Indiana. Divided into three groups the children were exposed to the instruments in the following manners of presentation: group one heard the recordings and saw the instruments played by an adult (the same pictures as study 3), group two heard the recordings and saw the instruments pictured without a performer, and group three heard the recording and saw the instruments played by children. The children were asked to point to the instrument on their instrument that they would prefer to play. the children demonstrated their ability to complete the task by pointing to each instruments picture on their answer sheet as it was played. The data was analyzed using a $2 \times 2$ design (sex by instrument). The results of the study showed females were not effected by the mode of presentation while boys responded differently when presented with the unbiased material than they did to the biased material. Both male and females favored instruments on the male side of Table 2, while females close from a wider range of instruments.

Abeles and Porter conclude that gender associations are widespread and consistent throughout all age groups. As a result of Study 4, the researchers indicate that careful presentation may initially alter this process.

The information in the Fortney study indicates that trumpet, low brass and percussion participation were gender
specific at a rate of $90 \%$ or higher. Saxophone was gender specific at a $72 \%$ level and no information was recorded for participation on piano, bass or drums as these are nonstandard instruments in the middle school setting. The current study sought to find the participation levels in the overall concert band setting, the jazz band setting and the relationship of concert band to jazz band participation. The conclusions indicated in the Fortney study being as gender specific as they were projected that the female percentages in jazz bands in the current study would be very low.

Although numbers in a high school program are dependent upon participation in the middle schools which feed into it, the relationship between the outcomes of the studies of middle schools of Dade County in 1993, and high schools in New Jersey in 1998, may be influenced by additional factors, including geographic and socioeconomic considerations, that decrease the relevance of comparison.

Abeles and Porters assertion that the range of experience one has is limited by the selection of an instrument supports the purpose the current research. The Abeles and Porter study was conducted 20 years before the present study, and as it investigated gender associations consideration of possible shifts in gender association over the past 20 years could be expected. When considered as an historical perspective of 20 year old perceptions, its close association with the gender realities of Dade County Middle Schools has relevance to the current study as it investigated another data set of instrumental participation in relation to gender.

## CHAPTER THREE

PROCEDURES AND ANALYSIS

## Sample

High schools located in the southernmost counties (Cape May, Salem, Gloucester, Atlantic, Ocean, Burlington and Camden) of New Jersey were the subjects of this study. Schools which housed an instrumental music program were included. The socioeconomic and ethnic makeup of the region was inclusive of a wide variety. The area includes urban, suburban, rural and resort communities and runs from poverty to affluence.

## Procedures and Analysis

A survey was distributed using the mailing list for membership of high school instrumental programs whose directors are members of the South Jersey Band and Orchestra Directors Association. Directors received at their school address a researcher generated survey instrument which included an instrumental inventory by gender. The survey was created using ClarisWorks 4.0 and printed in multiple colors for ease of completion. A self addressed stamped envelope
was created using a mailmerge function and a colorful stamp (Bugs Bunny) was used to draw attention to the return envelope. Band directors completed two tables. Table one was completed using an inventory of students on each instrument in the overall program. Band directors were asked to include each student only once, regardless of how many ensembles in which a student participated. Students who doubled on additional instruments were asked to be included on the instrument the director perceived to be their primary instrument. Jazz band participants were included in the Table 1 data set. Directors completed table 2 in the same way using information about the students that were members of the school jazz band. Data for all schools that returned the survey was combined and converted to percentages by gender in the following categories:

```
General participation on flute, double reeds, clarinet, saxophone, French horn, trumpet, trombone, baritone, tuba, percussion, mallets, guitar, bass and piano.
General Instrumental participation.
Jazz band participation on saxophone, trumpet, trombone, piano,bass, drums, guitar and mallets. Jazz band participation.
```

CHAPTER FOUR
PRESENTATION AND ANALYSIS
Analysis
Surveys were mailed to 68 high school band directories in the South Jersey region. Of the surveys mailed 43 were returned for a return percentage of $63 \%$. Of the 43 returned 39 were used in the data reported here as four surveys included no data on jazz bands.

The overall data demonstrate that the numbers for participation in the region are 52\% (male and 48\% female as indicated by Chart 1.

Chart 1


The number of students involved in jazz bands are 74\% male (652) and 26\% female (225). This proportion is depicted in Chart 2.

Chart 2


Data included in Table 3 and Chart 3 report the number of students by gender on instruments in the total
instrumental program. These data include students who participated in jazz band in combination with students who participated in the other aspects of the instrumental program.

Table 3

| Woodwinds | Flute | Double rd. | Clarinet | Saxophone |
| :--- | ---: | ---: | ---: | ---: |
| Male | 11 | 14 | 98 | 313 |
| Female | 379 | 52 | 384 | 131 |


| Brass | Trumpet | F Horn | Trombone | Baritone | Tuba |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Male | 281 | 35 | 113 | 67 | 73 |
| Female | 98 | 63 | 36 | 23 | 11 |


| Rhythm | Percussion Mallets | Guitar | Bass | Piano |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Male | 289 | 33 | 76 | 43 | 18 |
| Female | 84 | 53 | 8 | 9 | 31 |

Chart 3



Table 4 and Chart 4 display the collected data for student participation by gender in jazz band. Data for bass, piano, guitar, drums and mallet instruments are listed together as "rhythm section" for the purpose of examining practically significant data. In the standard jazz band section these four or five instruments constitute a section of players in the same way a trumpet or trombone section is constituted. Bass, piano, guitar and mallet instruments are not "standard" elementary school band instruments as is demonstrated by their low numbers in overall program .

Table 4

| Jazz Band | Saxophone | Trumpet | Trombone | Rhythm |
| :--- | ---: | ---: | ---: | ---: |
| Male | 174 | 149 | 105 | 197 |
| Female | 79 | 52 | 26 | 68 |

Chart 4


Chart 5 is a comparison of overall participation by gender with jazz band participation by gender. These data used to make this chart are used in conclusions stated in chapter 5 as to the nature of participation by gender.

Chart 5


## Interpretations

There is a practical difference in the percentages of females participating in overall music (48\%) and females participating in jazz band (24\%).

Participation in the school jazz band appears to be directly related to instrument selection. The percentages of students participating on specific instruments are directly related to the percentages that participate in the jazz band as shown in Table 3. Female saxophone students account for $30 \%$ of the overall numbers of all students playing saxophone in the region studied. Thirty-one per cent of the students playing saxophone in jazz band programs in this study are females. Data collected on trumpet players demonstrate the same correlation as $26 \%$ of trumpet players are female in overall programs and $26 \%$ also participate in jazz bands. Female trombone students account for $20 \%$ of all trombone players and $24 \%$ of jazz band participating trombonists. Similarly, females account for $29 \%$ of all students playing rhythm section instruments overall and $26 \%$ of those in jazz band. A female instrumentalist is no less likely to participate in jazz as her male counterpart due to gender.

The statements in the introduction of this research hypothesized that previous research suggests that gender inequities could be predicted due to lack of female role models, an imbalance in the selection of jazz instruments, a parental stereotyping of instrument appropriateness for gender, and a gender related difference in style preference. In the opinion of this researcher, only those hypotheses relating to instrument choice are valid. A lack of female
role models or gender style preference do not seem to be having an effect as females are as likely as males to be involved in the jazz band program in their school.

## CHAPTER FIVE

SUMMARY AND CONCLUSIONS

## Purpose and Problem of the Study

The purpose of this study was to empirically record participation by gender in jazz education at the high school level.

The problems of this study were to determine the gender makeup of the high school jazz band program in relation to that of the entire instrumental program. The use of data by instrument was to challenge or confirm the assertions of previous research that gender participation on specific instruments is influenced by gender.

## Design and Analysis

A survey was developed and distributed to 68 band directors of high school instrumental programs in the South Jersey Band and Orchestra Directors Association. Directors received a researcher generated survey instrument which included an instrumental inventory by gender. The survey was created using ClarisWorks 4.0 and printed in multiple colors
for ease of completion. A self addressed stamped envelope was created using a mailmerge function and a colorful stamp (Bugs Bunny) was used to draw attention to the return envelope. Band directors completed two tables. Table one was completed using an inventory of students on each instrument in the overall program. Band directors were asked to include each student only once, regardless of how many ensembles in which a student participated. Students who doubled on additional instruments were asked to be included on the instrument the director perceived to be their primary instrument. Jazz band participants were included in the Table 1 data set. Directors completed table 2 in the same way using information about the students that were members of the school jazz band. Data for all schools that returned the survey were combined and converted to percentages by gender in the following categories:

> General participation on flute, double reeds, clarinet, saxophone, French horn, trumpet, trombone, baritone, tuba, percussion, mallets, guitar, bass and piano.
> General Instrumental participation.
> Jazz band participation on saxophone, trumpet, trombone,piano,bass,drums,guitar and mallets.
> Jazz band participation.

## Results of the Study

The accumulated data from the surveys received indicate that a gender inequity exists in participation in the high school jazz programs of South Jersey. There is a disproportionate amount of males (76\%) to females (24\%) participating in school jazz bands.

The results of the survey confirmed the previous research (Fortney) in that participation on woodwind instruments was predominately female while brass and percussion participation was male dominated. Saxophone participation was seen as less gender specific in both the Fortney study and the current study, but still carried a strong gender association at $70 \%$ in both studies. French horn participation is the exception to the male dominated brass instruments as more females participate on this instrument than males.

The results of this study were also consistent with those of the Abeles and Porter studies in that the following instruments can be ranked in the following order as to participation by gender:

| Female dominant |  |
| ---: | :--- |
| Flute Clarinet Saxophone Dominant |  |
| Trumpet Trombone Drum |  |

## Conclusions and Recommendations

As a result of the accumulated data in relation to the previous research, a predictable gender inequity has been demonstrated to exist in jazz band participation. The most
significant inference that can be concluded from this data set suggests that females are as likely to participate in jazz band as males if they play a jazz band instrument. The idea that females are discouraged from participation by a lack of role models or style preference is not supported by these data.

The following recommendations are presented here for consideration:

1) Female students need to be encouraged to perform on trumpet, trombone and rhythm section instruments.
2) Educators need to made aware of the evidence that female instrumentalists are as likely to participate in jazz band as their male counterparts.
3) Instrument choice limits a students opportunity to learn jazz. Creative opportunities for all instrumentalists in the idiom of jazz need to be developed.

APPENDIX

## Dear Band Director,

I am currently conducting a research study for completion of a Masters degree program at Rowan University. The study I have undertaken requires the collection of data on participation by gender in our instrumental music programs. The data collected from each school will be combined with that of the data of the other completed surveys to create a picture of participation for the region. The study deals with gender participation overall and data for individual schools will not be compared nor will participating schools or directors be named in the study.

Completing the survey should take about five minutes with your instrumental rosters in front of you. I imagine many of you could complete the table accurately from memory on the spot. A self addressed stamped envelope has been enclosed for your convenience.

Thank you in advance for your help in this research. After attending a convention in New York a few weeks ago, I feel that the results of this study will fill a gap in the knowledge base and I am anxious to complete this study. Please include a request for a summary of this study on your survey if you are interesed in reading the results.

Sincerely,

Doug Barber
Director of Bands
Shawnee High School
School: 654-7544
Home: 797-1097

Complete the following table with the total number of students by gender that are presently involved in your instrumental music program. Include in your totals for table 1 any student who performs in any of your ensembles (including concert band, marching band, jazz band etc.). Count each student only once and decide what you perceive their primary instrument to be if they double.

## Overall Instrumentation

| Table 1 | Male | Female |
| :---: | :---: | :---: |
| Flute |  |  |
| Dbl. Reed |  |  |
| Clarinet |  |  |
| Saxophone |  |  |
| Trumpet |  |  |
| French Horn |  |  |
| Trombone |  |  |
| Baritone |  |  |
| Tuba |  |  |
| Percussion |  |  |
| Mallets |  |  |
| Guitar |  |  |
| Bass |  |  |

Please complete table 2 concerning the students in your jazz band. If you have more than one jazz band please include the total in all your jazz boands in your numbers.

## Jazz Bond Instrumentaion

| Table 2 | Male | Female |
| :---: | :---: | :---: |
| Saxophone |  |  |
| Trumpet |  |  |
| Trombone |  |  |
| Piano |  |  |
| Bass |  |  |
| Drums |  |  |
| Guitar |  |  |
| Mallets |  |  |

1) Include "color" instruments in closest related columns. (Alto and bass clarinets as clarinets. Alto, tenor and baritone saxophones as saxophones.)
2) Table 1 should include a tally of students in your entire program. If you have a bassonist that plays in concert and marching band count that student only once. Jazz band students are to be included in Table 1 also.
If you need further clarification please call Doug Barber @ 654-7544 X4460

## BIBLIOGRAPHY

Bash, Lee (1984). The Relationship Among Musical Aptitude, Music Achievement, Psychosocial Maturity, Sex, Age, Preliminary Improvisation Performance and the Acquisition of Improvisation Performance Skill." Jazz Research Papers , 10 , 6-12.

Delzell, J.K., and D.A. Lappla. "Gender association of musical instruments and preferences of fourth-grade students for selected instruments, Journal of Research in Music Education, 40, (1992), 93-103.

Dwinell, Patricia L., and Mark C. Hogrebe (1984). Differences Among Ability Groups in Participation in the Performing Arts at the High School Level. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, 1984.
Fortney, Patrick M., J. David Boyle, and Nicholas J. DeCarbo (1993). A Study of Middle School Band Students ' Instrument Choices. Journal of Research in Music Education, 41, 28-39.

Hargreaves, David J., Chris Comber, and Ann Colley (1995). Effects of Age, Gender, and Training on Musical Preferences of British Secondary School Students. Journal of Research in Music Education, 43, 242-250.
Hayden, Marion, Diana Spradling and Sunny Wilkinson. "Sisters in Jazz," Jazz Educators Journal , 30 (1997), 42-45.

Koza, Julia Eklund (1994). Females in 1988 Middle School Music Textbooks: An Analysis of illustrations. Journal of Research in Music Education, 42, 145-171.
Lawn, Richard (1981). The Jazz Ensemble Director's Handbook.
Oskaloosa, Iowa: C.L. Barnhouse.

Madura, Patrice Dawn (1996). Relationships among Vocal Jazz Improvisation Achievement, Jazz Theory Knowledge, Imitative Ability, Musical Experience, Creativity, and Gender. Journal of Research in Music Education, 44, 252-267.

May, W. V. "Musical style preferences and aural discrimination skills of primary grade school children." Journal of Research in Music Education, 32, (1985), 722.

Purcell, Piper and Lara Stewart, "Dick and Jane in 1989." In Readings and Cases in Educational Psychology, ed. Anita E. Woolfolk, (Boston: Allen and Bacon, 1993), 93.

Sheridan, Margaret, "Joanne Sets the Pace in Women's Jazz World," South China Morning Herald , 13 October 1992, reproduced and translated on the Joanne Brackeen WWW site.

Zervoudakes, Jason and Judith M. Tanur (1994). Gender and Musical Instruments: Winds of Change? Journal of Research in Music Education, 42, 58-67.


[^0]:    16 Zervoudeakes, Jason and Judith M. Tanur. "Gender and musical instruments: Winds of change?," Journal of Research in Music Education, 42 (1994), 58-67.

    17 Bash, Lee. "The Relationship among musical aptitude, music achievement, psychosocial maturity, sex age, preliminary improvisation performance and the acquisition of improvisation performance skill," Jazz Research Papers, 10, (1984), 6-12.

    18 Madura, Patrice Dawn. "Relationships among the vocal jazz improvisation achievement, jazz theory knowledge, imitative ability, musical experience, creativity and gender," Journal of Research in Music Education, 44, (1996), 252-267.

