

7.

A RESEARCH AGENDA TO INVESTIGATE THE IMPACT OF MUSIC EDUCATION

Donald A. Hodges

The University of North Carolina at Greensboro

The primary purpose of the Sounds of Learning project is to determine the impact of music education. As steps toward doing so, the previous five chapters have provided literature reviews and analyses of the impact of music education on academic achievement, child growth and development, aspects of the child's self, the uses and functions of music in daily life, and the home, school, and community environments. Because these chapters focused on what we do know, the purpose of this chapter is to focus on what we do not know and thereby to create a research agenda based on the gaps in our knowledge of the impact of music education. The chapter begins with some general comments on music education research, an overview of what we know and don't know based on the literature reviews, and concludes with a research agenda and requests for proposals.

GENERAL COMMENTS ON MUSIC EDUCATION RESEARCH

Prior to reviewing the five preceding chapters, it might be instructive to consider some general observations on music education research. On the positive side, music education research has been published in the primary journal, the *Journal of Research of Music Education* (JRME), for more than 50 years with the first issue printed in 1953. During this time the music education research community has increased significantly in numbers and in sophistication. The number of research studies presented at convention poster sessions is burgeoning and articles in JRME and

other pertinent journals reflect marked growth in quality of research. Increased sophistication in research design, statistical analysis, qualitative techniques, and interpretation is providing the profession with a valuable knowledge base.

It is only fair to recognize, however, that there are some limitations in this knowledge base. Consider, for a moment, studies reviewed in Chapter 6. A perusal of Table 1, a quantified view of the research from this chapter, is quite instructive. First, one notices that the total number of studies having to do with music or the arts is quite small. Our knowledge base concerning the impact of music on home, school, and community is very limited. Second, the age of some of the research data gives one pause. Although it is perfectly true that older studies may be very insightful, it is also quite true that society and the schools have changed dramatically over the years. For example, in 1955 Burmeister queried community members as to their attitudes toward music education. It would be extremely valuable to know whether those attitudes still hold today. A third observation is that five of the studies were conducted in foreign countries. Information from Brazil, Britain, and Sweden might apply to American concerns, but without comparative data, one can only speculate. The general discussion on home environment also includes data from Canada, Kenya, and Puerto Rico.

Not shown in Table 1 are additional issues of concern. Due perhaps mostly to restricted access to students in schools, restrictions which grow increasingly tighter, few studies randomly assign subjects to treatment groups. That is, most use intact or convenience samples. This makes control of independent variables, factors that might bias the outcome of an experiment, considerably more difficult.

Representativeness of sample to population and sample size are important. Again referring to Burmeister (1955), since he only sampled communities in Missouri, can we assume the findings

apply to all areas of the country? Likewise, Norrby (2002) had a sample size of four. Although case studies can often provide invaluable information that might be lost in larger samples, is this representative of much larger populations? In addition, these two particular examples represent compounded difficulties in that one sampled communities in Missouri in 1955 and the other surveyed four high school girls in Sweden. Representativeness of sample to population can also be seen in other ways. Brand (1986), for example, administered his home survey to Mexican-American second grade students. What can his findings tell us about African-American seventh graders today?

Table 1
Research Studies Quantified: Home, School, Community

HOME			SCHOOL				COMMUNITY			
Yrs	Home Env. & Learn	Mus & Child Dev	School Climate	Effect of Mus on Learning	Effect of Mus on Learner	Effect of Mus. on L. Non-Mus. Sub.	Com. Needs & Ben of Mus.	Mus & Youth Culture	Mus & Beh	Totals
50s							1			1
60s		2								2
70s		1	1*			2		1	1+	6
80s	3	1+1*			1	2	1+			9
90s	1		1*+1+	2		1*+1	1		2	10
00-			1	1		1		2+	1	6
Tot	4	5	4	3	1	7	3	3	4	34

* = General arts education, not specifically music.
+ = Data from non-American schools.

Absolutely none of this discussion should be taken as criticism of the researchers mentioned because many of these are excellent studies. Rather, this is recognition that all research studies have limitations of location, sample size, timeliness, and so on. And, in fact, to avoid the perception of a negative view of music education research, the opening, positive comments need to be reiterated. There is much to celebrate about music education research. The sole purpose of this discussion is to recognize the need to expand and upgrade the knowledge base. Policy

makers need to make good, careful decisions based on solid, rigorous evidence. The purpose of SoL is to move that enterprise forward by funding targeted research projects.

SYNTHESIS OF CHAPTERS 2-6

Although each of the previous five chapters will be reviewed here, no attempt will be made to move systematically through all the possible topics that deserve or need more research. Simply put, we need more research on nearly every topic; in fact, it is difficult to think of any topic on which we do not need more research. Therefore, the following discussion will be selective (and undoubtedly somewhat arbitrary) in nature, attempting to highlight certain topics that seem especially critical.

2. The Impact of Music Education on Academic Achievement (Hodges & O'Connell)

Although there is a fair amount of literature on the impact of music education on academic achievement, it is not overwhelmingly positive. Rather, there are quite a few studies showing that music students have higher academic scores than their peers, another group of studies with mixed results (e.g., improvement in reading but not in math), and a third group that show no improvement for music students. The majority of these are descriptive studies where test scores are compared for music students and others. Another group of studies are concerned with the relationship between music aptitude and academic achievement. The prevailing trend is a stable, but low degree of relationship. Only a small group of studies are experimental and most of these do not involve random assignment of subjects to treatment groups.

A small number of studies have concerned the relationship of auditory perception to reading. It seems reasonable to hypothesize that music education improves auditory perception, which in turn might impact reading skills. This does, indeed, seem to be the case. Pitch discrimination

appears to be the most critical factor. In general, however, studies of the effect of music instruction on reading or math achievement have led to mixed results.

The same can be said for integrated arts instruction. Even where positive results have been found, it is impossible to determine music's contribution relative to the other arts that were included. In three studies that integrated music without other arts into the teaching of other subject matter, no significant effects were found.

Background music is so prevalent in contemporary American society that one might expect it to be paired with academic work—doing homework, taking tests, and so on. Perhaps precisely because music is so omnipresent in society, there is a natural assumption that it will have a positive effect. Yet, the data are, as with nearly every topic in this chapter, quite mixed. Simplistically, we could even say that during test taking, for example, music in the background will have a positive effect on some students, a negative effect on others, and no effect on a third group. This is hardly the kind of information that is useful to teachers, administrators, and policy makers. But, it reflects the current state of our knowledge.

One avenue music education researchers could explore is the effect of personal listening devices such as iPods. One can imagine a technologically-advanced class environment in which students could choose to listen to music or not while taking a test. And, those who choose to listen to music could choose the particular kind of music they prefer. This same principle has been used successfully in music medicine. That is, music can be very effective in ameliorating pain and anxiety when patients are allowed to choose whether or not to have music and are further allowed to select personal preferences (Reilly, 1999; Pratt & Spintge, 1996; Spintge & Droh, 1992).

3. The Impact of Music Education on All Aspects of A Child's Growth and Development (Teachout)

Cognitive Development

Evidence indicates that music processing occurs to a limited extent in the third-trimester fetus, in a significant way in newborns, and increasingly so in infants. Research on infants makes a case for the integration of nature and nurture in that certain musical skills are evident from birth while others are clearly influenced by learning. Somewhat overlooked and underrepresented in the literature is the socializing role of music in the infant's home and other environments such as day care. As critically important as music may be in cognitive development, it may be even more important in emotional and social development. While lullabies help to calm fussy babies, do they also aid in mother-infant bonding? Does music coming from parents and the media, such as Mr. Rogers, Sesame Street, and the like, aid in the development of positive feelings, in the development of emotional control mechanisms, or in establishing appropriate social interactions? Contrarily, is there any evidence to suggest that adult musical styles played in the home (especially at high loudness levels) has any deleterious effect on infant growth and development?

Neuroimaging data from adult musicians documents quantifiable changes in brain morphology that are even more pronounced among those who started studying music seriously before the age of seven. Although genetic influences are not ruled out, it is becoming increasingly clear that music study changes the brain. It is important to note that these changes come more from active music making, not passive listening. What implications these changes have for nonmusical processing remains to be determined. Some answers may come from a major initiative now underway to gauge the effects of music instruction on brain changes in

beginning instrumentalists ages six to eight and to determine whether there are transfer effects to other learning domains (Schlaug, Norton, Overy, Cronin, Lee, & Winner, 2004).

Motor Development

Music education activities have a positive effect on motor development in very young, preschool, and school-aged children. Though the available evidence demonstrates a developmental trend, the amount of research is still quite limited in that there are few studies and these frequently have small sample sizes. Most of the knowledge base concerns motor development in early childhood and pre-school children. Very little is known about the impact of music education on motor development on elementary through high school students.

Emotional Development

Most of the research literature in this area has focused on emotional responses to music listening. In general, it appears that music education experiences do not necessarily lead to differences in emotional responses when the music is relatively unsophisticated. This resonates with what one can observe in the popular culture. People with widely divergent music education backgrounds respond appropriately to the music they hear in movies, on television, and in restaurants, shops, and other common settings. Music education experiences do appear to benefit those who listen to more complex musical styles. If it is true that those who engage in more sophisticated artistic experiences require more educational experiences to derive maximum understanding, music education researchers and music education philosophers should work together to make a stronger case for how engaging with more sophisticated musical experiences would benefit listeners. If a student can enjoy and understand many musical experiences without the benefit of a musical education, why should he spend time and energy learning more complicated musical languages?

Social Development

Once again, there is limited evidence concerning the impact of music education on social development. The scant data available suggest a positive role for music in social development. As with motor development, this body of literature is almost entirely restricted to pre-school children. Given the enormous role music plays in social interactions of children and youth throughout elementary, middle, and high school years, it is amazing that this topic has been so neglected. Music education researchers, especially those working with psychologists and/or sociologists, have a vast territory waiting to be explored. The potential findings could have very significant implications for the importance of music education in the lives of school students.

Impact on At-Risk Students

At-risk students pose a serious concern for those involved in education. From the general—extra-curricular activities and arts programs—to the specific—music education classes—there are tantalizing suggestions that music can play a positive role in keeping at-risk students in school. Although the literature on this topic is limited, it uniformly suggests that music can play an important role in dealing with at-risk students. It is, yet again, another way in which music might provide an effective means of dealing with a critical issue.

Impact on Special Needs Students

Music therapists have been the primary contributors to an understanding of the impact of music on special needs students. Of necessity, the sample sizes are almost always quite small. Also, more attention has been paid to younger students. Nevertheless, it is clear that music can play a very important role in helping special needs students achieve success. It would be very helpful to have information throughout the educational continuum from pre-K through high school.

4. The Impact of Music Education on Aspects of the Child's Self (O'Connell)

Although there is not a great deal of research on aspects of the child's self, it is almost all supportive of the notion that music has a positive impact. Music education experiences generally lead to better attendance rates and increased motivation, self-discipline, and cooperation. The literature on self-esteem was mixed; there is a hint that music may be helpful for those with low self-esteem but may have little impact on those with normal self-esteem. Likewise, attitudes toward music are mixed with very positive attitudes among primary school children and negative attitudes among secondary students. Perhaps the latter is due to the mismatch between "school music" and popular/rock music.

No research was found for the impact of music on self-image. This omission is one that ought to be rectified by the profession. Anecdotally, one can observe the effect of music on self-image and it would be very informative to have solid research studies in this area. Another area in need of careful research is the impact of music education on student health. Hearing health, vocal health, neuromusculoskeletal health, and mental health have been studied in professional musicians and are beginning to be studied in university music majors. It should be stating the obvious to say that many health issues begin much earlier than the college years. If music educators are interested in preventing health problems before they occur, then solid research on these issues is imperative.

5. The Uses and Functions of Music as a Curricular Foundation for Music Education (Haack)

Haack's chapter is different from the other three in at least two major respects: (1) it follows a model provided by Merriam (1964) and (2) it has direct curricular implications. Each of these leads to suggestions for a research agenda.

While it is tempting to suggest that each of the ten functions should be buttressed by ongoing research, two are brought forward here as critical to understanding the impact of music education—the functions of emotional expression and the integration of society. A common notion about music education is that students learn to express themselves emotionally through music. But what do we really know about this process? Is it necessarily true that students in school music groups are expressing more positive emotions than those playing in a hard rock band? Do we know how to teach “emotional expression”? When students participate in ensembles what is the relationship between group and individual emotional experiences? Do students sacrifice individual emotional experiences to the group experience, or is there even a difference? Obviously, this list of questions could become quite lengthy and demonstrates the critical need to understand this aspect of music education in considerably more depth and sophistication.

That music can play an important role in the integration of society seems quite obvious on the surface. But, examining this notion more closely leads to a number of intriguing questions. How important is it that all American citizens share a common body of songs? How does one find the balance between teaching songs that represent the heritage of our country such as “Battle Hymn of the Republic” or “Oh what a beautiful morning” versus those that represent the cultural heritage of specific minority groups? Indeed, there is a larger tug-of-war between “the preservation of the canon” and inclusion of multicultural music education. In the ideal, most would argue that both are necessary. But, the reality is that music educators have precious little time with their students and hard choices have to be made.

Beyond choice of song repertoire, another aspect of this function is cultural cohesion versus cultural pluralism. Is it true that students from a wide variety of ethnic and social backgrounds

can bond and become united through performing in school music groups? Many music teachers can provide anecdotal stories about how students have been brought together through music. For example, in one school Latino, African-American, and Anglo students have become united while singing in a school-sponsored gospel choir and correspondingly racial tension has been reduced throughout the school (Street, personal communication). Could the impact reach beyond the school to the entire community?

One can easily reverse this function and think about the ways in which music contributes to isolation and fragmentation in society. In most schools, students could be divided into cliques based, in part, on their musical choices. What characteristics do those who listen primarily to country-western music share that are different from those whose music of choice is rap? Is social identity through musical style preference harmful in the sense of polarizing one group from another or can it be helpful too in the sense of individuals finding camaraderie within a group of like-minded peers? Common sense suggests that both are possible, but data supporting music's role in the integration of society are woefully lacking. Probably few doubt that the impact of music education on social integration is powerful, but we must know more.

6. The Impact of Music Education on Home, School, and Community (Asmus)

The influence of the home is important to so many issues in music education but it is woefully under-represented in the literature. It would be very interesting to have Brand's (1986) HOMES survey updated and extended. The original survey focused on four dimensions of home musical environment: (1) parents' attitude toward music and musical involvement with child; (2) parents' concert attendance; (3) parent and child ownership and use of record player or tape player, and (4) parent plays a musical instrument. Administering such a revised survey to a very

large number of households distributed over a large geographical area would provide invaluable information about relationships between home environment and music education.

Those who spend time in a public school—especially teachers, administrators, and students—could likely comment on the impact of music programs on the overall school climate. This is seen in obvious ways such as music at pep rallies and athletic contests but also in the school reputation as reflected in contest ratings and parental comments following school performances. Unfortunately, there is very little research literature on this topic.

Issues concerning students and their involvement with popular music are in dire need of serious and extensive study. Most people would likely agree, on the basis of casual observation alone, that students are involved in the popular culture in significant ways. However, unless and until this involvement is studied in depth, “school music” experiences may be increasingly marginalized in students’ lives. Notice this last statement—that school music experiences might be increasingly marginalized—is one of pure conjecture; there are precious few data to support or refute such a contention. Highly related would be an extensive investigation into relationships between different musical genres and behavior. Is there any truth to a perception that students in school bands, orchestras, and choirs exhibit fewer inappropriate or anti-social behaviors than those who prefer hard rock, rap, or other styles of youth music?

RESEARCH AGENDA

With these reviews in mind, it is tempting, again, to call for more research on every topic. In this regard, it might be worth reiterating a statistic reported in the section in Chapter 2 on reading: more than 115,000 research studies on reading have been published in the literature (National Institute of Child Health and Human Development, 2000). By comparison, all the literature cited in this entire document seems paltry indeed. Since calling for more research on

every topic, even though that is justified, would not be helpful, some prioritization seems in order. Therefore, what follows is a broad research agenda that will be used to guide the subsequent requests for proposals. Following the Research Agenda are the Requests for Proposals that will be funded in Phase 2.

I. The Impact of Music Education on Achievement

- A. What is the impact of music education on other subjects in the curriculum?
 - 1. Examine relationships between participation in music education programs and grades in nonmusic classes.
 - 2. Examine the effects of continued participation in music education on grades in nonmusic classes. In other words, are there changes in the relationships over time, such that continuing to participate in music results in stronger or weaker relationships?
 - 3. Conduct experimental research to determine the impact of music education on learning in other domains. Wherever possible, subjects should be randomly assigned to treatment groups.
 - 4. Investigate the impact of music teacher traits (e.g., personality, enthusiasm, rapport with students, etc.) on academic achievement.
- B. What is the effect of integrating the teaching of music into language arts, mathematics, geography, science, foreign language, history, or other subjects? Do various aspects of music (e.g., rhythm or pitch) have differing effects?
 - 1. Investigate integrated music instruction and learning in nonmusic subjects, pre-K through 12th-grade.
 - 2. Investigate specific aspects of music instruction on nonmusic subjects, including rhythmic and melodic perception, performance, instruction, and learning.
- C. What are the effects of music education on standardized tests?
- D. How do melodic-rhythmic instruction, perception, and performance contribute to spatial temporal reasoning/memory?

II. The Impact of Music Education on All Aspects of a Child's Growth and Development

- A. What is the impact of music education on the development of perception and cognition?

1. Investigate the chronological points at which music learning begins to support and perhaps enhance neural development.
 2. Determine whether there are critical, optimal, or sensitive periods for music learning and if, so when they occur and under what circumstances.
 3. Continue to construct more rigorous research paradigms to determine the effects of music instruction on nonmusical subjects.
 4. Compare music learning to other stimuli to determine whether there are music-dependent effects on the learning of nonmusical material.
 5. Utilize neuroimaging technologies to determine what changes take place in the brain as a result of music learning. Also, determine whether any observed changes have implications for learning in other domains besides music.
- B. What is the impact of music education on motor development?
1. Investigate more thoroughly the connections between music education and motor development along a chronological continuum from infancy through high school.
 2. Determine whether certain music education activities are more conducive to the development of gross motor skills and others to fine motor skills.
- C. What is the impact of music education on emotional development?
1. Music psychologists have made significant strides on understanding emotional responses to music. Music education researchers should be encouraged to collaborate with psychologists for more sophisticated studies of emotion and music
 2. Investigate whether those who study music develop more sensitive emotional responses. Determine whether they are able to plumb emotional experiences to greater depths than those without music education experiences.
 3. Investigate whether music students are able to express emotions more effectively than those who do not study music. When they express emotions musically, are they expressing their own or the composers' or the directors'?
- D. What is the impact of music education on social development?
1. Determine the role of music education experiences on the social behaviors of music students. Are music students more cooperative, more stable in their relationships with others, more apt to get along with others?
 2. Investigate the ways in which music education might influence interpersonal relationships based on gender, ethnicity, socio-economic status, and so on.

E. Impact on At-Risk Students

1. Determine whether music education experiences can influence at-risk students to stay in school and reduce the number of their absences.
2. Determine whether music education can assist at-risk students to develop a greater sense of self-esteem.

F. What is the impact of music education on special needs students?

1. Investigate the ways in which music education experiences can affect acceptance attitudes of students toward special needs students.
2. Determine best practices for teaching special needs students within the regular music classroom or rehearsal.

III. What is the impact of music education upon the child's self?

1. Investigate the impact of music education on attendance, motivation, self-discipline, self-esteem, cooperation, perseverance, and attitude.
2. Initiate a research program into the impact of music education experiences on the child's health. Based on solid data obtained with school-aged children, initiate a prevention program.

IV. Uses and Functions of Music as a Curricular Foundation for Music Education

A. What is the impact of music education on the function of emotional expression?

1. Investigate the impact of music education on students' abilities to express themselves emotionally.
2. Investigate whether emotional expression shows a developmental trend with continuous, prolonged involvement in music education.
3. Investigate whether music education promotes "self expression" or whether teachers and/or composers determine emotional expressions.
4. Investigate the effects of engaging in different musical genres (e.g., classical, jazz, country-western, gospel, rock, rap, etc.) on emotional expression.
5. Examine whether music education enables participants to have keener insights into emotional experience.

B. What is the impact of music education on cultural cohesion and on cultural pluralism?

1. Investigate the impact of a common body of songs on social integration.
2. Investigate the impact of various musical genres on social integration.
3. Investigate whether music education can positively impact issues in social integration in the schools such as racism and inclusion (gender, special needs students, etc.).

C. Can Merriam's ten functions serve as the basis for a music education curriculum?

1. Create and evaluate a ten-lesson unit based upon Merriam's functions for middle school general music classes.
2. Create and evaluate suitable lesson plans for ensembles based on Merriam's ten functions.

V. The Impact of Music Education on Home, School, and Community

A. What is the role of the home in music education?

1. Revise and extend Brand's (1986) HOMES survey, administering it to a large sample over a broadly distributed geographic region with ethnic and socioeconomic representation.
2. Investigate the basis for the strong, positive relationships between participation in music education and higher grades or SAT scores that are commonly reported. Since correlation does not imply causation, is this rather a reflection of strong parental support, instruction in time management, or other variables?

B. What different outcomes, if any, might be derived from participation in school music education experiences versus participation in non-school musical experiences

1. Investigate and compare the "meanings" derived from participation in school and non-school musical experiences.
2. Examine a common (mis?)conception that "classical" music training leads to more positive attitudes and behaviors, while participation in certain genres of music (e.g., heavy metal, hard rock, gangsta rap, etc.) does the opposite.
3. Investigate whether it is true, as an aesthetic philosophy of music would suggest, that music education provides "insights into the human condition" or, as Howard Gardner's (1983) theory of multiple intelligences suggests, that music is another way of knowing.

SOUNDS OF LEARNING: THE IMPACT OF MUSIC EDUCATION

Phase 2: Request for Proposals

Proposal submission deadline: November 1, 2005

Sounds of Learning: The Impact of Music Education is a major research initiative designed to examine the roles of music education in the lives of school age children. The goal of this project is to expand the understanding of music's role in a quality education. The International Foundation for Music Research is sponsoring a series of research studies, with additional funding provided by the Fund for Improvement of Education from the U.S. Department of Education and the Grammy Foundation. Phase 1 research projects were awarded to Patricia Campbell, University of Washington and Christopher Johnson, University of Kansas.

A Steering Committee oversees the establishment of various research agenda and proposal review processes. Grants and research contracts will be awarded competitively following peer-review processes. Steering committee members include:

Don Hodges, The University of North Carolina at Greensboro
Ed Asmus, The University of Miami
Paul Haack, The University of Minnesota
Kristin Madsen, Senior Vice President, The Grammy Foundation
Patricia Sink, The University of North Carolina at Greensboro
David Teachout, The University of North Carolina at Greensboro
Mary Luehrsen, Executive Director, International Foundation for Music Research
Debra O'Connell, The University of North Carolina at Greensboro

Project Scope

This initiative will examine music education's influence on:

- (a) Achievement and success in school,
- (b) All aspects of a child's growth and development,
- (c) The uses and functions of music in daily life,
- (d) The home, school, and community environments, and
- (e) Aspects of the individual self.

Reviews of related literature on each of these topics are contained in the *Sounds of Learning Status Report*, with research details in an online database. An outgrowth of these reviews is a Research Agenda that leads to the RFPs in this announcement. The *SOL Status Report* and database can be found at: <http://www.uncg.edu/mus/soundsoflearning.html> or on the IFMR website at www.music-research.org.

RFP 2.1: The Role of Music Education in Social Cohesion and Social Pluralism

Proposals are invited to investigate the role music education plays in social cohesion and social pluralism in the schools. In the former, the investigator should examine how music education functions to promote social integration within disparate constituencies in the school. For example, to what degree are students with different socioeconomic backgrounds, abilities/disabilities, ethnicities, and cultural heritages successfully integrated into cohesive units

via music education experiences? Similarly, what roles do music experiences (including school-based and non-school performing groups) have in promoting cultural pluralism and does this result in both positive (e.g., enhancement of group identity) and negative (e.g., fragmentation, isolation, competition, etc.) outcomes? Overall, is the social integration of a given school (and perhaps its surrounding community) aided or impeded by music education and by non-school-based musical experiences? Is music unique in providing these outcomes? The successful proposal should include (a) how different school-based and non-school-based musical experiences will be identified, (b) how different constituencies (e.g., socioeconomic status) will be identified, (c) how the effects of music activities on social cohesion and pluralism will be determined, and (d) how the researchers will determine spread of effects to the school as a whole and perhaps to the surrounding community.

RFP 2.2: The Impact of Music Education on Adequate Yearly Progress as Defined by the *No Child Left Behind Act*

During January 2002, the *No Child Left Behind Act* (NCLB) was signed into law. The law required states to implement standard-based assessments in reading and mathematics for students in grades three through eight by the 2005-2006 academic year. Because of the NCLB accountability standards and requirements, improving students' reading and mathematics achievements has become a major focus of educators, researchers, and policy makers. The purpose of this project is to conduct a quantitative research study of the impact of participating in music instruction on third- through eighth-grade students' achievements in reading and mathematics. Additionally, a part of the study should be designed to determine the extent to which student participation in music instruction contributes to school achievement. Variables other than music instruction that may affect reading and mathematics achievement and that should be controlled in the study are grade level, gender, ethnicity, school location (e.g., rural, urban, or suburban), music aptitude and achievement, and parents'/guardians' education and socioeconomic level. The successful proposal should include a description of: (a) how schools and students will be selected for the research study, (b) the process of obtaining the aforementioned data to accomplish the objectives of this project, and (c) methods of data analysis.

RFP 2.3: THE IMPACT OF A QUALITY MUSIC PROGRAM ON K-12 EDUCATION

The purpose of this project is to perform qualitative research within a school district recognized for its musical quality. We are interested in obtaining a proposal that can identify the primary student achievement and success outcomes resulting from participation in music education programs. The study would look at the breadth of possibilities of how music impacts children in elementary and secondary schooling as exemplified in one school district with a quality music program. The study should provide a sorted list of the major outcomes that can be used to focus future research. The supporting qualitative evidence for each outcome's rating must be provided. The successful proposal should indicate how a school district with a quality music program will be identified, as well as student achievement and student success outcomes.

RFP 2.4: Awareness of the Functions of Music in Music Education.

Alan Merriam identified ten functions of music that could be used as the basis for a contemporary, motivational curriculum for music education that would impact daily living. Proposals are solicited that would examine the degree to which such functions are considered as

a part of instruction within the field. Additionally, we seek research that explores the feasibility of applying these functions in both music classrooms and music rehearsals. The successful proposal will reflect a broad diversity in the sample selected for study and should identify (a) how the role of functions will be determined and (b) how information on application of functions in classrooms and rehearsals will be gathered.

RFP 2.5: The Role of the Home Environment on Success in School Music and Student Success in School

Researchers are invited to submit a proposal for an investigation into the role of the home environment on success in music and school. Do students who are successful in music share common features in their homelives? What roles do parents and siblings play in this regard? What features of the home environment (e.g., presence of a piano or other instruments) contribute most toward success in school music and student success in school? Interrelationships among the home, school music, and student success in school are of critical concern. The successful proposal will reflect a broad diversity in the sample selected for study, including a variety of socioeconomic levels and cultural and ethnic heritages.

RFP 2.6: The Effects of Music Education on Self-Esteem/Self-Identity/Self-Image

Proposals are sought that would examine the effects of music on self-esteem/self-identity/self-image. What kinds of music experiences are most conducive to the development of a positive self-esteem? What role does music play in the construction of identity? Does participation in non-school musical experiences (e.g., garage bands, gospel choirs, rap or hip-hop groups, heavy metal bands, etc.) lead to a different sense of self-image? The successful proposal will also include special needs and at-risk populations.

RFP 2.7. The Meanings of Music for Students in School-based and Non-school Musical Activities

Proposals are requested for an investigation into the meanings of musical experiences. In particular, we are interested in knowing whether students who participate in school-based music education ensembles (e.g., middle school band, high school chorus, etc.) derive different meanings from their experiences than those who participate in non-school musical experiences (e.g., garage bands, gospel choirs, rap or hip-hop groups, heavy metal bands, etc.). Data such as attendance records, office referrals for misconduct, suspensions, grades, and so on, should be used to determine whether any relationships exist among levels of participation, meanings derived, and behaviors exhibited. The successful applicant will present a well-designed strategy to collect both qualitative and quantitative data and to integrate the two. The successful proposal will focus on the basic question of what is the value of having music in schools?

How to Apply

All proposals are due on November 1, 2005.

Award notification: December 5, 2005.

Final, completed reports for most projects are due December 1, 2006. Applicants who feel a longer timeline is justified may request a later deadline for a longitudinal project.

Proposals should be submitted via email to info@music-research.org.

Funding and Awards

Projects will be funded through direct research contract and/or via grants to sponsoring institutions. The IFMR will not fund in-kind or institutional overhead costs that are more than 8 percent of project budgets. Funding range or caps are not specified; budgets will be assessed based on relevancy to project scope of work and appropriateness to project goals and outcomes.

Applicants are encouraged to target proposals to the most appropriate RFP. Research teams involving music education researchers and others from disciplines such as education, sociology, or psychology are encouraged. Funding is awarded on a competitive basis; researchers should apply for only one RFP.

Proposal requirements:

1. State research topic for proposed study, taken from one of the seven RFPs addressed above. Describe relevancy of study to current understanding. Summarize, do not include comprehensive literature review in proposal.
2. Describe target population and setting(s) for research; outline current partnerships or affiliations that will enable execution of research.
3. Outline research design and methodology to research proposed area; include description of tests or measures that will be implemented or other study protocols.
4. Describe expertise/experience to implement proposed study; if applicable, provide web links to published research papers and articles.
5. Proposal body not to exceed 10 double spaced pages for # 1-4; budget, timeline and CV additional.
6. Provide project timeline and detail implementation tasks; use a one page timeline grid if desired.
7. Provide detailed budget. Budget must include expenses (airfare, hotel) to allow the principal investigator to attend the mandatory Research Awards Conference on February 18-19, 2006 in Greensboro, NC.
8. Attach CV. Work samples and references may be requested.

A panel of experienced music education researchers will evaluate all proposals. Direct all inquiry to sounds@uncg.edu; applications should be sent via email only to: International Foundation for Music Research at info@music-research.org.

REFERENCES

- Brand, M. (1986). Relationship between home musical environment and selected musical attributes of second-grade children. *Journal of Research in Music Education*, 34, 112-120.
- Burmeister, C. A. (1955). A study of community attitudes toward music education in the public schools of selected communities in Missouri. *Journal of Research in Music Education*, 3, 77-91.
- Merriam, A. (1964). *The anthropology of music*. Evanston, IL: Northwestern University Press.
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- Norrby, C. (2000). Youth speech, youth identities, and music worlds in Sweden: Four high-school girls describe music. *Text*, 20(4), 569-602.
- Pratt, R. & R. Spintge, R. (eds.). (1996). *MusicMedicine*, Vol. 2. St. Louis: MMB Music.
- Reilly, M. (1999). Music, a cognitive behavioral intervention for anxiety and acute pain control in the elderly cataract patient. Unpublished doctoral dissertation: The University of Texas Graduate School of Biomedical Sciences at San Antonio, School of Nursing.
- Schlaug, G., Norton, A. C., Overy, K., Cronin, K. T., Lee, D. J., & Winner, E. (2004). Effects of music training on children's brain and cognitive development. In S. D. Lipscomb, R. Ashley, R. O. Gjerdingen, & P. Webster (Eds.), *Proceedings of the 8th International Conference on Music Perception and Cognition* (pp. 133-134). UK: Causal Publications.
- Spintge, R. & Droh, R. (eds.) (1992). *MusicMedicine*. St. Louis: MMB Music.