



Education Advocacy Newsletter

Volume 1, Issue 1

Welcome

National Music Council Introduces New Newsletter

The National Music Council's 1999 *Leadership in Music* symposium entitled 'Music Makes Kids Smarter: Implications and Precautions for Advocacy' drew much enthusiasm and response from those who attended. This Newsletter is a response to the many requests we received for written comments from the symposium panelists. It includes statements from three of our six panelists, as well as excerpts from "The Value and Quality of Arts Education: A Statement of Principles," a collaborative document developed by ten of the nation's most important educational organizations.

In addition, this newsletter will inform you about the on-going activities of the National Music Council. In the coming months, with your input, we hope to be able to add Member News. We look forward to hearing from you!

Dr. David Sanders, *Editor*

Music Makes Kids Smarter: Implications and Precautions for Advocacy

by Dr. Rita Aiello

In the last few years, there has been a growing interest in examining the important role that music has in the education of children. To a great extent, this interest can be traced to a seminal 1993 study conducted by Rauscher, Shaw, and Ky (Rauscher, Shaw, and Ky, 1993). The researchers found that college students obtained a temporary increase in the score of three sets of standard IQ spatial reasoning tasks after listening for 10 minutes to music by Mozart but not after listening for 10 minutes to a relaxation tape or being exposed to silence. This result, commonly labeled the Mozart effect has given rise to a great deal of research in psychology and music education.

Although the experiment measured only an immediate effect on spatial-temporal reasoning, many people have interpreted the finding as meaning that listening to Mozart's music enhances general intelligence permanently. As a music educator I deeply believe that listening to Mozart may have an ever-lasting effect for many young students, and for many people of all ages. Nevertheless, it is important to understand the data at hand for what they are and not for what we wish to read into them. Some studies have not been successful in replicating the effect of music exposure on reasoning ability (Chabris, Steele, Bella, Peretz, Dunlop, Dawe, Humphrey, Shannon,

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Kirby, & Olmstead, 1999) while other ones have (Rauscher, 1999). Moreover, a number of investigations have given strong support to the value of music education in general (Teaching Music, 1999).

The existing findings strongly suggest that the relationship between exposure to music and intellectual abilities should be explored further. The effect that music on the abilities of the child ought to be researched within the classroom, the laboratory, the music studio, and the home. We will find out more answers only by broadening this research, and not by abandoning it. Most of all, we ought not to forget that music must have a prominent place in the curriculum because of its intrinsic value as an art form and as an innate mode of expression.

References:

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Dr. Rita Aiello is a member of the graduate faculty at The Juilliard School where she teaches seminars in the perception of music.

NMC E-mail List

If you haven't been receiving timely updates about *Arts Advocacy Day* via e-mail you're not on the NMC E-mail List. Please e-mail your address to David Sanders at **SANDERSD@mail.montclair.edu**. (And don't forget to visit our website: www.musiccouncil.org.)

Bringing Arts Back to Tulsa Schools: A Work in Progress

By Nancy Feldman

This is the time of the Great Convergence. For the first time since the age of Plato (who recommended philosophy, music and math as the only important subjects), scientists, employers (especially those in high tech industries), industry (the engine of our country), education, unions, performing arts organizations, and parents agree that arts (music, art, drama, creative writing and dance) are no longer a frill but a vital tool in brain development. This is a paradigm shift. It is due to neurologists and the researcher's abilities to brain scan and see what is actually happening inside the brain. It is validated by clinical tests at UCLA, Irvine, the Yamaha studies and many others, which show the effect on the arts on brain development and functioning, particularly in the areas of spatial and temporal reasoning.

Today people are demanding that the arts not be taught only as separate core subjects, but integrated throughout the school curriculum, using examples of half notes, eighth notes, etc., in arithmetic classes, writing poetry in reading and english classes, and experiencing art, music and poetry in the geography, history and social studies being taught.

We have indeed made a paradigm shift. There is now widespread recognition that computers and math and reading deal with symbols, and that the arts provide unique training in the use of symbols. Some purists protest that we are making the arts mere tools and that this will take away from the sheer joy of music or art. I would reply that knowing that food is nourishing and makes you strong in no way subtracts from the sheer joy of eating. The instrumental argument for the arts is a great sales tool, if it does not lead to wild expectations. It in no way detracts from the esthetic any more than the nutrition detracts from the food. Making wild claims for the arts is just as bad, however, as making wild claims for food or for anything else.

I have been asked to tell you of our grass roots experience in Tulsa where the arts were taken out of the schools and labeled frills in the first financial crunch of the 1970's. This happened all over the country, and because of our limited scientific knowledge, even those of us who loved the arts, didn't protest—at least not enough!

Our Arts and Humanities Council has been providing what little arts there are: artists in the schools and a clone of the Lincoln Center Institute training for teachers. Successful as these are, they are clearly not enough.

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After chairing a national Summit on *Arts at the Core of Learning* in Tulsa in April, I began to think we had to do something. I made an appointment with our Superintendent of Schools (we are a system of 45,000 students), prepared myself with all the test results, a Time magazine article, a Yamaha videotape and went forth to do battle.

Our Superintendent quickly said, "I know all that; now what are we going to do about it?" I was thrilled until he then said, "If you will be chair, I will appoint a task force to make recommendations. I want my wife to be on it." He has a beautiful and talented wife and I knew then that he wanted the task force to succeed. "I don't want you to reach for the moon but to be practical and I want it finished by December 31." He and I sat there immediately and worked on names for him to appoint. We included large employers, the PTA, the musician's union and asked the lead staff of the major performing arts organizations to be on a technical advisory board to have their very important and valuable interest and yet to avoid too much self-interest.

I made an appointment with the editorial staff of our newspaper and included the director of the Arts and Humanities Council of Tulsa and the chair of the Chamber of Commerce cultural committee who later issued an official statement of support. The editors never said yes, but immediately began talking about their experiences in band, chorus and plays. I knew we would have support.

The task force met at the different arts organizations six times in tightly structured meetings designed to reach a mutually agreed upon result. You could see people coming together. Attendance was high. We stressed pragmatism, and listened to everyone. The newspaper reported each meeting and there

was much input from the community at large with letters and phone calls to my home from hundreds of people. So much interest and enthusiasm. Although we had originally started out with the idea of getting the arts into the schools, the memories and nostalgia was so great, that I quickly changed the phrase to getting the arts BACK into the schools. This resonated with everyone.

It was not all clear sailing: is anything? There were those who saw this as a plan to subsidize all the arts organizations through in-school performances; there were people who didn't like the idea of integrating the arts into the curriculum; and there were discussions of which arts and how much, how to fit them into the schedule, etc. But the group coalesced and the performing arts group began working together.

Serendipity entered the scene, always a welcome, when the report was submitted on December 23rd with fanfare from our truly supportive newspaper just before the many Christmas parties began. People rushed up to me with offers of help, and rather than say, sorry, too late, I took down their names on the backs of invitations and cocktail napkins and ended up with 250 significant and powerful supporters. Those were the best parties I ever went to.

The report was actually carefully written by ten of our group who met at my house for coffee every Monday and who worked out details before each large meeting. I dislike mentioning their affiliations because I chose each for their good ideas and ability to wordsmith, but it included the arts curriculum supervisor (we have one, only one), the manager of Saks, a VP of Nation's Bank, someone from Williams Companies, our biggest employer, a former PTA president, the director of our Arts and Humanities Council, the editor of our minority newspaper, a member of the State Arts Council and a fine researcher.

I then visited with each member of the school board at length and found amazing sympathy, understanding, encouragement, but of course, questions about finance. When I presented to the School Board in January, despite a tense union situation about teacher salaries, we had a very warm reception and again, each member recalled how much the arts had meant to them. This is the key. Why should our children and grandchildren not have what we had? This is especially true now when we know that along with the pleasure, the arts are important for the functioning of the brain.

We felt it important to include 6 easy steps, which cost little money, or even no money. We started with a strong statement of principle and of commitment from both the Board and the Superintendent that we were determined to have arts in the schools. We followed with the appointment of an implementation committee to help on both PR and financing.

These First Steps are:

1. Appoint an implementation and strategy committee (now functioning).
2. Use current curriculum coordinators to integrate the arts into the core curriculum. This has now started and another arts coordinator has been hired – 100% more!
3. Schedule opportunities for curriculum development to integrate the state arts requirement objectives into the academic core curriculum. (This has started, but we lack necessary specialists and planning time. We have a group of principles working on this.)

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4. Implement the arts as part of the core curriculum. (Each school is answering an arts readiness survey and for the first time the site assessment forms have questions on the arts, thus communicating the importance of an arts policy from the administration to the principals and site management committees.)
5. Begin to phase out district practice against hiring teachers with single certification. (not yet started)
6. Assign art and music teachers to teach their specialty only. (not very many specialists yet)

The Board has issued a strong statement of support and the Superintendent included this at the first school principals' meeting, asking me to speak as well,

We have successfully convened the 6 major local arts organizations to join in a sequential performance grant proposal. A major cooperative step.

We are determined to persevere and to reach at least some level of success. Already the community awareness is so high, that something will be done, but it will take money.

Nancy Feldman is an educator and arts advocate in Tulsa, Oklahoma. She was the recipient of the National Music Council Arts Education Advocacy Award in 1999.

MUSIC ADVOCACY IN THE SCHOOLS: THE TEMPTATIONS OF RESEARCH

By Anne Farber

Various recent studies - involving children in classrooms, rats in mazes, neurotransmitters in excitation - have suggested that music has beneficial effects that can be categorized and called up, on demand. I am doubtful for two reasons about the wisdom of resting the case for music in the schools too firmly on the claims of this research.

First, I suspect that these claims, which have proliferated across the land in a brush fire of enthusiastic credulity, are not going to prove out. Results will disappoint.

Second, the instructional programs that are designed to capitalize on the research in question, and are thus, by definition, in service not to music itself but to its putative effects, will be sorely compromised if not distorted by their non-musical aims.

Many of the experiments are in themselves quite interesting, although others have a dubious quality that has been noted by several critics (and some seem merely bizarre). More disturbing than the science involved, however, are the band-wagons of promise that have hitched themselves to the research results, flashy vehicles driven by both scientists and advocates. Of course, these advocates desire what I, what we all, desire - that our shared belief in the absolute indispensability of music to the education of our children will prevail over competing convictions, shortages of funds, the indifference of administrators and any other obstacles, and that the teaching of music, respected and supported, will flourish in all our schools.

Where I part company from those who wave the banners of extra IQ points, improved spatial-temporal skills, attitude enhancement and so on, is on the likelihood of these happy consequences of musical training coming to pass with enough reliability or longevity to justify curricular decisions made on their basis. I don't believe that music makes us smarter. Or better behaved. Or more successful. It's larger and more penetrating and much more slippery than that.

My second reason for doubting the "science" approach concerns the pedagogical choices it may inspire. If Mozart's music has desirable effects because of its symmetries and coherent patterning, shall we then build a basic course of study around Mostly Mozart, with a sprinkling of appropriate Haydn, Beethoven, perhaps Schubert, from the classical period, where symmetries and patterning abound? What about Everything Else? Is music that is short on salutary symmetries to be dropped from the canon? That will leave a rather large hole.

Other curricular decisions will involve the activities the children engage in. Keyboard training seems to have produced more desirable spatial-temporal results than either instruction on other instruments or singing. Shall we then forget about band, orchestra, and chorus? This is perhaps indicated anyway, since individual lessons appear to better at score-boosting than group lessons. (Not very surprising,) An entire curriculum of individual

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instruction, however, may strike some administrators as financially impractical. Well - maybe a big room with fifty electronic keyboards is the answer.

My musings here about how musical education might be revolutionized by being pegged to non-musical benefits are extreme, deliberately alarmist. But they are not inconsistent with the fundamental position that music is useful, that its usefulness is greater than its inherent value (and is easier to define and to manipulate), and that its use is not in conflict with that (indisputable but somewhat mysterious) inherent value.

Consider the plan to treat the work of Mozart - or any other composer - as a hypodermic. We take a drug, licit or not, exclusively for its effect. To use a piece of music in this way, for its effect (pepping up brain cells and self-esteem and what-not), goes beyond disrespect. It violates the music, it violates the sensibilities of the students -we should be teaching them how to hear Mozart, not dosing them - and it violates our own musical integrity. Of course music has practical effects- it promotes romance; it confirms, sometimes inflames, group solidarity; it soothes us to sleep. But our job as music educators is not to promote romance, or arouse national pride, or deliver downtime. Or work improvements in the brain. Any of these effects may be by-products of our instruction, which is fine, as long as they're by-products, not goals. Our job is to teach music: how to hear it, how to sing and play it how to think about it - in any number of ways. Music is the vehicle and music is the destination. Let it have its influences and work its magic in the children's minds in whatever ways it - and they - will.

Finally, I come back to does music make us smarter. If it did, wouldn't we be smarter than our non-musician friends? Wouldn't musicians as a group be smarter than other groups - English

teachers, doctors, computer programmers, policemen, social workers, astronauts? Is there the slightest evidence that any of this is so?

Musicians like to tell musician jokes. Like other genre jokes-lawyer jokes, politician jokes, ethnic jokes, sexologist jokes, etc. - that play off some popular (often unflattering) conceptions about the group in question, musician jokes tend toward certain themes,

A conductor raps his stand and addresses his players: "Please indicate the following changes in your score. Measures 32 to 40, marked four-four, we will play in seven-eight (just drop the 4th eighth note); at letter B transpose everything up a half-step for eight measures, then back down; four measures before letter D cross out *accelerando* and write *ritard*." The soprano, somewhat alarmed, asks, "But what about me?" "Just do exactly what you did yesterday," he replies.

Not only singers, but drummers, French horn players, bass players, even conductors, are likely butts of musician jokes. It seems that such jokes are suggesting, among other things, that musicians, far from being or thinking themselves smarter than others, or being thought smarter by others, don't mind poking fun at how being smarter doesn't necessarily have much to do with being a musician.

"Evidence" of this sort, anecdotal or comical, will never compete with lab reports. But our embrace of the lab reports as guides to music education threatens to skew our understanding of what music means in our lives and how we should be thinking about teaching it.

Anne Farber, immediate past president of The Dalcroze Society of America, teaches children, adults, and teachers-in-training in New York City. She is co-director of the Dalcroze Program at the Diller-Quaile School of Music, and serves on the faculties of The Special Music School of America and the Lucy Moses School. She maintains, as well, a private piano studio, and writes articles on various musical topics, particularly improvisation.

Statement of
Joan Schmidt
Member of Board of Directors
National School Boards Assoc.
before the
House Education Caucus
United States House of
Representatives
July 14, 1999

Chairman Clement, Chairman Blunt and members of the Caucus, my name is Joan Schmidt. I serve on the school board in a farming community in rural Montana. I also serve on the Board of Directors for the National School Boards Association (NSBA) which has headquarters in Alexandria, Virginia. I'm here to tell you that NSBA supports

raising student achievement, and we know music can do that.

Students who participate in music earn higher grades and score better on standardized tests. And now researchers are discovering that certain kinds of music instruction actually increase the potential for understanding subjects

like math, science, engineering. Researchers are telling us that music can make kids smarter.

But right now, music programs are being cut. School districts across the nation feel as if they are navigating the shoals between Scylla and Charybdis. On the one side, the schools face funding shortages that make it impossible to operate a basic educational program, and on the other side, they face political pressure to raise scores on standardized tests.

For districts lacking adequate funding, the decision to cut music or any other academic program is usually made only after the school district has already eliminated field trips, skimmed on building repairs and delayed purchasing textbooks.

Even more insidious than the damage wrought by funding shortages, is the damage wrought by political pressure. You see, recent public concerns about basic skills have led some school districts to narrow their curriculum, eliminating subjects like music in an effort to improve scores on standardized tests ... even though we already know that students who participate in music score higher on the SAT.

A research project conducted by psychologist Frances Rauscher of the University of Wisconsin at Oshkosh and physicist Gordon Shaw of the University of California at Irvine, involved preschool children. Some received private piano keyboard lessons while others received private lessons on a computer. Two control groups received neither piano nor computer

instruction. According to a report published in the February 1997 issue of *Neurological Research*, the children who had received piano keyboard instruction scored thirty-four percent higher than the others on tests designed to measure spatial-temporal reasoning.

So the next question raised is whether this affects children of school age. In a pilot program during the 1996-97 school year, Wisconsin's School District of Kettle Moraine conducted a similar study using kindergarten students rather than preschoolers and group piano keyboard instruction rather than private lessons. By December the piano students scored thirty-three to thirty-five percent higher than those who had received no formal music instruction, and by the end of the school year, the difference was an astonishing forty-six percent.

Researchers now are looking specifically at the impact of piano training on disadvantaged children. In March of this year, *Neurological Report* published the results of a study by Professor Gordon Shaw of the University of California, Irvine. This project involved second graders from one of the poorest-performing schools in Los Angeles. Students received piano lessons along with a special computer program. After four months, they were tested for their ability to analyze ratios and fractions. Guess what! These students scored twenty-seven percent higher than their counterparts from another school district who did not receive the piano instruction.

What lies ahead? Dr. Rauscher is in the middle of a project involving children from a Head Start program. Their academic achievement will be tested in 2002. We don't have the last word on the music-brain research. We know music does good things, but it will be years before we know the long-term implications. As the research unfolds, it is likely to have significant ethical implications for the public schools.

In the findings on piano keyboard instruction hold true over time, schools will have to address the learning disparity between those who have access to private lessons and those who do not. Poor children do not usually receive piano lessons. Research tells us that music lessons in the school can help narrow the gap. Music is an equalizer, and that makes it a good investment.

This kind of investment means more than sending students home with a classical CD, it means, more than giving them piano training in kindergarten. It means more than teaching students about music: it means teaching students to do music. And it requires a long-term commitment to a rigorous, sequential arts curriculum based on standards which define what every student should know and be able to do.

What does this mean for us? When that little kid comes to us on the first day of kindergarten, we need to promise that every single year, there will be a full educational program. And that decisions will be based on solid research. And that the most important consideration will be what is good for kids. We have to keep the promise.

Statement of
June M. Hinckley, President
MENC: The National Association
for Music Education

Before the Senate Committee on
Health, Education, Labor and Pensions

June 29, 1999
Submitted for the Record

Mr. Chairman and members of the Committee I am pleased to have this opportunity to present this statement for the record on the importance of music education for all children. My remarks focus on the latest research documenting the link between music instruction and child brain development and the vital role that music education can play in dramatically improving academic achievement and building self-esteem, discipline, and other skills necessary for success.

The Research

There is an exciting and growing body of research that indicates that music instruction at an early age actually wires the brain for learning. According to psychologist Frances Rauscher of the University of Wisconsin at Oshkosh, "Children are born with all the nerve cells, or neurons, they will ever have. However, connections between neurons, called synapses, are sparse and unstable. Synaptic connections largely determine adult intelligence. During the first six years of life, the number of synapses increases, dramatically, and synapses already in place are stabilized. This process occurs as a result of experience or learning. Those synapses that are not used are eliminated – a "use it or lose it" situation. Music training appears to develop the synaptic connections that are relevant to abstract thought."

Dr. Rauscher set out to build upon existing neurobiological studies of the human brain and further explore the role of music in its development. In a study published in *Neurological Research*, Dr. Rauscher and physicist Gordon Shaw of the University of California at Irvine worked with middle-income and at-risk preschoolers. One group of children received piano keyboard lessons. Another group received computer training, and a third group received no special instruction. The children who received piano keyboard lessons scored significantly higher on spatial reasoning tests than the other children who were matched in IQ and socio-economic status --- 34% higher to be exact. Spatial-temporal reasoning involves higher brain functions that are needed to solve complex math and science problems. Thus, the findings

pointed to a direct link between music instruction and math and science aptitude.

Dr. Rauscher expanded her work to determine if this remarkable improvement could be found with children in a public school setting. The answer was a resounding "yes." She replicated her earlier study but used kindergarten students rather than preschoolers and group, piano instruction rather than private lessons. She found that students receiving keyboard instruction outscored those who received no formal music training by an astonishing 48% on spatial reasoning tests. According to Dr. Rauscher, "enhancements are still present following one year after the lessons have terminated, although children who received the lessons for two years score even higher."

Because of this pilot study, Wisconsin's School District of Kettle Moraine now requires all kindergarten students in the district to receive piano keyboard instruction as part of the regular school curriculum. Plans are underway to expand the program to students in every elementary classroom. It is important to note that the cognitive and academic improvements highlighted by the research come about only with sequential instruction in music provided by qualified teachers, not through mere exposure to music. Arts exposure and enrichment programs, such as trips to a museum and performances of the local symphony, are vital because of the pleasure they provide and the critical role they play in enhancing education. They often furnish the spark that inspires a child to pursue formal music study. However, they cannot substitute for formal instruction as part of the regular school day. Dr. Rauscher emphasized this when she noted that "there is no scientific data indicating that, when provided in isolation from music instruction, enrichment and exposure programs induce long-term cognitive benefits. It is important not to confuse these forms of musical involvement."

Beyond the work of Dr. Rauscher and her colleagues, there also is considerable research that supports the important role of music and the other arts in keeping students in school, particularly at the high school level. For many disadvantaged students, participation in music programs; helps to break the cycle of failure they have so often encountered in life. While study after study demonstrates that participation by disadvantaged children in a well-developed, sequential music program can be extremely beneficial academically, socially, and emotionally, these are the very students who are most often denied access to music instruction. Middle- and upper-income

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parents who have the resources are able to provide private music, instruction for their children. But not all children have that luxury, and many are denied access to the benefits of music education if their schools do not provide it.

Implications for Education Reform

The research clearly shows that music instruction, taught by qualified teachers, produces measurable enhancements in the development of children's brains, resulting in significant educational benefits. Unfortunately, because of the misperception that music and the other arts are "frills," these programs are the first to be eliminated when school budgets are restricted. The problem is most acute in poor urban and rural areas, but it is a problem shared by virtually all school districts to one degree or another. As noted by Joan Schmidt, National Board Member of the National School Boards Association, "Ironically, at a time when education research indicates the need to move in one direction, political pressures, dictate another. Recent public concerns, about basic skills in reading and, mathematics have led some school districts to narrow their curriculum, eliminating ostensibly peripheral subjects like music, in an effort to improve scores on standardized tests." Ms. Schmidt goes on to state that if the goal of education reform is to improve student achievement, policymakers should take note of the latest music/brain research. Music education should be part of the core curriculum for every child.

What Congress Can Do

Elementary and Secondary Education Act (ESEA) Reauthorization

As Congress considers legislation to reauthorize ESEA, MENC asks that you work with us to:

1. Reinforce the concept of music and arts education as part of the core curriculum.

Music and the other arts are core academic subjects and have been recognized as such by Congress and the Administration in GOALS 2000. Moreover, all of the major education associations likewise have spoken to the value of arts education as part of the core curriculum (see attached Statement of Principles). This status should be confirmed and reinforced in ESEA legislation. Incorporating the Statement of Principles into ESEA is one way to accomplish this.

2. Strengthen music and arts education programs authorized under Title X by establishing a formal consultative role for arts

educators in determining the nature, scope, and direction of these programs. Currently, no such role exists in the statute. It makes no sense for education policy to be determined and executed without the involvement of educators.

3. Ensure greater access to school music programs for at-risk students. Special efforts are needed to make certain that disadvantaged students have the same access to comprehensive, balanced, and sequential instruction in music as students in more affluent districts. MENC would be pleased to work with the Committee to identify school programs that are making successful use of music with disadvantaged children to determine what they are doing, how it has led to their success, and how these programs can be replicated throughout the country.

4. Prioritize funding so that arts education grants are available to schools. We understand the budget constraints that Congress faces. All disciplines and programs must compete for scarce dollars. However, simply re-ordering priorities in light of the scientific research on the link between music education and higher achievement potential in math and science would be an effective beginning.

5. Make certain that federal funds that are directed to after-school arts activities are not used to replace in-school music and arts classes. Investing in after-school programs is sound policy. There appears to be an urgent need for these programs, and MENC fully supports this type of investment. But if the arts, become relegated to an after-school activity, they lose their rightful status as a core academic subject. And, children who cannot take advantage of after-school programs because of conflicts with sports or work commitments or for other reasons, will be denied access to the significant benefits achieved through arts education.

The Congressional Bullypulpit

Beyond what Congress can accomplish through legislation, Congress can exercise a leadership role in disseminating to parents, school administrators, and state education officials information on the music/brain research and its implications for education reform. Congress can accomplish this task through hearings, town hall meetings, floor statements, media outreach, and other effective uses of the powerful Congressional bullypulpit. As Congress places greater emphasis on state and

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local flexibility, its role as communicator and disseminator of information becomes even more crucial. Parents, school boards, and state policymakers want to do what is best for our children, but their decisions must be based on the best information available.

Conclusion

MENC stands ready to work with this Committee and with Congress as you consider ways to strengthen educational opportunities and achievement for all children. We would like to serve as a resource to you as you develop legislation and hopefully undertake to spread the message to your constituents about the importance of music education.

MENC Music Education Facts & Figures

“Every student in the nation should have an education in the arts.”

This is the opening statement of “The Value and Quality of Arts Education: A Statement of Principles,” a document from the nation’s ten most important educational organizations, including the American Association of School Administrators, the National Education Association, the National Parent Teacher Association, and the National School Boards Association.

The basic statement is unlikely to be challenged by anyone involved in education. In the sometimes harsh reality of limited time and funding for instruction, however, the inclusion of the arts in every student’s education can sometimes be relegated to a distant wish rather than an exciting reality.

It doesn’t have to be that way! All that’s needed is a clear message sent to all those who must make the hard choices involved in running a school or school system. The basic message is that music programs in the schools help our kids and communities in real and substantial ways. You can use the following facts about the benefits of music education, based on a growing body of convincing research, to move decision-makers to make the right choices.

The benefits conveyed by music education can be grouped in four categories:

- ?? Success in society
- ?? Success in school
- ?? Success in developing intelligence
- ?? Success in life

When presented with the many and manifest benefits of music education, officials at all levels should universally support a full, balanced, sequential course of music instruction taught by qualified teachers. And every student *will* have an education in the arts.

Benefit One: Success in Society

Perhaps the basic reason that every child must have an education in music is that music is a part of the fabric of our society. The intrinsic value of music for each individual is widely recognized in the many cultures that make up American life — indeed, every human culture uses music to carry forward its ideas and ideals. The importance of music to our economy is without doubt. And the value of music in shaping individual abilities and character are attested in a number of places:

- The U.S. Department of Education lists the arts as subjects that college-bound middle and junior high school students should take, stating “Many colleges view participation in the arts and music as a valuable experience that broadens students’ understanding and appreciation of the world around them. It is also well known and widely recognized that the arts contribute significantly to children’s intellectual development.” In addition, one year of Visual and Performing Arts is recommended for college-bound high school students. — *Getting Ready for College Early: A Handbook for Parents of Students in the Middle and Junior High School Years, U.S. Department of Education, 1997*
- The College Board identifies the arts as one of the six basic academic subject areas students should study in order to succeed in college. — *Academic Preparation for College: What Students Need to Know and Be Able to Do, 1983 [still in use], The College Board, New York*
- The arts create jobs, increase the local tax base, boost tourism, spur growth in related businesses (hotels, restaurants, printing, etc.) and improve the overall quality of life for our cities and towns. On a national level, nonprofit arts institutions and organizations generate an estimated \$37 billion in economic activity and return \$3.4 billion in federal income taxes to the U.S. Treasury each year. — *American Arts Alliance Fact Sheet, October 1996*
- The very best engineers and technical designers in the Silicon Valley industry are, nearly without exception, practicing musicians. — *Grant Venerable, “The Paradox of the Silicon Savior,” as reported in “The Case for Sequential Music Education in the Core Curriculum of the Public Schools,” The Center for the Arts in the Basic Curriculum, New York, 1989*

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Benefit Two: Success in School

Success in society, of course, is predicated on success in school. Any music teacher or parent of a music student can call to mind anecdotes about effectiveness of music study in helping children become better students. Skills learned through the discipline of music, these stories commonly point out, transfer to study skills, communication skills, and cognitive skills useful in every part of the curriculum. Another common variety of story emphasizes the way that the discipline of music study — particularly through participation in ensembles — helps students learn to work effectively in the school environment without resorting to violent or inappropriate behavior. And there are a number of hard facts that we can report about the ways that music study is correlated with success in school:

- According to statistics compiled by the National Data Resource Center, students who can be classified as “disruptive” (based on factors such as frequent skipping of classes, times in trouble, in-school suspensions, disciplinary reasons given, arrests, and drop-outs) total 12.14 percent of the total school population. In contrast, only 8.08 percent of students involved in music classes meet the same criteria as “disruptive.” — *Based on data from the NELS:88 (National Education Longitudinal Study), second follow-up, 1992.*

- Students with coursework/experience in music performance and music appreciation scored higher on the SAT: 52 points higher on the verbal and 36 points higher on the math for music performance, and 60 points higher on the verbal and 41 points higher on the math for music appreciation than students with no arts participation. — *1998 College-Bound Seniors National Report: Profile of SAT Program Test Takers, The College Entrance Examination Board, Princeton, New Jersey*

- Data from the National Education Longitudinal Study of 1988 showed that music participants received more academic honors and awards than non-music students, and that the percentage of music participants receiving As, As/Bs, and Bs was higher than the percentage of non-participants receiving those grades. — *NELS:88 First Follow-up, 1990, National Center for Education Statistics, Washington DC*

- Physician and biologist Lewis Thomas studied the undergraduate majors of medical school applicants. He found that 66% of music majors who applied to medical school were admitted, the highest percentage of any group. 44% of biochemistry majors were admitted. — *As reported in "The Case for Music in the Schools," Phi Delta Kappan, February 1994*

- A study of 811 high school students indicated that the proportion of minority students with a music teacher role-model was significantly larger than for any other discipline. 36% of these students identified music teachers as their role models, as opposed to 28% English teachers, 11% elementary teachers, 7% physical education/sports teachers, 1% principals. — *D.L. Hamann and L.M. Walker, "Music teachers as role models for African-American students," Journal of Research in Music Education, 41, 1993*

- Students who participated in arts programs in selected elementary and middle schools in New York City showed significant increases in self-esteem and thinking skills. — *National Arts Education Research Center, New York University, 1990*

Benefit three: Success in Developing Intelligence

Success in school and in society depends on an array of abilities. Without joining the intense ongoing debate about the nature of intelligence as a basic ability, we can demonstrate that some measures of a child's intelligence are indeed increased with music instruction. Once again, this burgeoning range of data supports a long-established base of anecdotal knowledge to the effect that music education makes kids smarter. What is new and especially compelling, however, is a combination of tightly-controlled behavioral studies and groundbreaking neurological research that show how music study can actively contribute to brain development:

- A research team exploring the link between music and intelligence reported that music training is far superior to computer instruction in dramatically enhancing children's abstract reasoning skills, the skills necessary for learning math and science. — *Shaw, Rauscher, Levine, Wright, Dennis and Newcomb, "Music training causes long-term enhancement of preschool children's spatial-temporal reasoning," Neurological Research, Vol. 19, February 1997*

- Students in two Rhode Island elementary schools who were given an enriched, sequential, skill-building music program showed marked improvement in reading and math skills. Students in the enriched program who had started out behind the control group caught up to statistical equality in reading, and pulled ahead in math. — *Gardiner, Fox, Jeffrey and Knowles, as reported in Nature, May 23, 1996*

- Researchers at the University of Montreal used various brain imaging techniques to investigate brain activity during musical tasks and found that sight-reading musical scores and playing music both activate regions in all four of the cortex's lobes; and

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that parts of the cerebellum are also activated during those tasks. — *Sergent, J., Zuck, E., Tenial, S., and MacDonall, B. (1992). Distributed neural network underlying musical sight reading and keyboard performance. Science, 257, 106-109.*

- Researchers in Leipzig found that brain scans of musicians showed larger planum temporale (a brain region related to some reading skills) than those of non-musicians. They also found that the musicians had a thicker corpus callosum (the bundle of nerve fibers that connects the two halves of the brain) than those of non-musicians, especially for those who had begun their training before the age of seven. — *Schlaug, G., Jancke, L., Huang, Y., and Steinmetz, H. (1994). In vivo morphometry of interhemispheric asymmetry and connectivity in musicians. In I. Deliège (Ed.), Proceedings of the 3d international conference for music perception and cognition (pp. 417-418). Liege, Belgium.*

- A University of California (Irvine) study showed that after eight months of keyboard lessons, preschoolers showed a 46% boost in their spatial reasoning IQ. — *Rauscher, Shaw, Levine, Ky and Wright, "Music and Spatial Task Performance: A Causal Relationship," University of California, Irvine, 1994*

- Researchers found that children given piano lessons significantly improved in their spatial-temporal IQ scores (important for some types of mathematical reasoning) compared to children who received computer lessons, casual singing, or no lessons. — *Rauscher, F.H., Shaw, G.L., Levine, L.J., Wright, E.L., Dennis, W.R., and Newcomb, R. (1997) Music training causes long-term enhancement of preschool children's spatial temporal reasoning. Neurological Research, 19, 1-8.*

- A McGill University study found that pattern recognition and mental representation scores improved significantly for students given piano instruction over a three-year period. They also found that self-esteem and musical skills measures improved for the students given piano instruction. — *Costa-Giomi, E. (1998, April). The McGill Piano Project: Effects of three years of piano instruction on children's cognitive abilities, academic achievement, and self-esteem. Paper presented at the meeting of the Music Educators National Conference, Phoenix, AZ.*

- Researchers found that lessons on songbells (a standard classroom instrument) led to significant improvement of spatial-temporal scores for three- and four-year-olds. — *Gromko, J.E., and Poorman, A.S. (1998) The effect of music training on preschooler's spatial-temporal task performance. Journal of Research in Music Education, 46, 173-181.*

- In the Kindergarten classes of the school district of Kettle Moraine, Wisconsin, children who were given music instruction scored 48 percent higher on spatial-temporal skill tests than those who did not receive music training. — *Rauscher, F.H., and Zupan, M.A. (1999). Classroom keyboard instruction improves kindergarten children's spatial-temporal performance: A field study. Manuscript in press, Early Childhood Research Quarterly.*

- An Auburn University study found significant increases in overall self-concept of at-risk children participating in an arts program that included music, movement, dramatics and art, as measured by the Piers-Harris Children's Self-Concept Scale. — *N.H. Barry, Project ARISE: Meeting the needs of disadvantaged students through the arts, Auburn University, 1992*

Benefit four: Success in Life

Each of us wants our children — and the children of all those around us — to achieve success in school, success in employment, and success in the social structures through which we move. But we also want our children to experience "success" on a broader scale. Participation in music, often as not based on a grounding in music education during the formative school years, brings countless benefits to each individual throughout life. The benefits may be psychological or spiritual, and they may be physical as well:

- Music making makes the elderly healthier.... There were significant decreases in anxiety, depression, and loneliness following keyboard lessons. These are factors that are critical in coping with stress, stimulating the immune system, and in improved health. Results also show significant increases in human growth hormones following the same group keyboard lessons. (Human growth hormone is implicated in aches and pains.) — *Dr. Frederick Tims, reported in AMC Music News, June 2, 1999*

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- Music education opens doors that help children pass from school into the world around them — a world of work, culture, intellectual activity, and human involvement. The future of our nation depends on providing our children with a complete education that includes music. — *Gerald Ford, former President, United States of America*

- During the Gulf War, the few opportunities I had for relaxation I always listened to music, and it brought to me great peace of mind. I have shared my love of music with people throughout this world, while listening to the drums and special instruments of the Far East, Middle East, Africa, the Caribbean, and the Far North — and all of this started with the music appreciation course that I

was taught in a third-grade elementary class in Princeton, New Jersey. What a tragedy it would be if we lived in a world where music was not taught to children. — *H. Norman Schwarzkopf, General, U.S. Army, retired*

- Music is about communication, creativity, and cooperation, and, by studying music in school, students have the opportunity to build on these skills, enrich their lives, and experience the world from a new perspective. — *Bill Clinton, President of the United States of America*

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