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Music and curricular inclusion: A history, cognitive research findings, and Nebraska superintendent survey.

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MUSIC AND CURRICULAR INCLUSION: A HISTORY, COGNITIVE RESEARCH FINDINGS, AND NEBRASKA SUPERINTENDENT SURVEY

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In Partial Fulfillment

of the Requirements for the Degree

Master of Music

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by

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THESIS
ACCEPTANCE

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

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Abstract

A review of literature indicates that education in the United States has been based on the great Greek and Roman philosophers' model of education that included the arts as a core subject. Yet, current models often exclude music and the arts, despite the Greco-Roman model and current research that implies a study of music may improve a range of essential cognitive abilities. Therefore, the purpose of this study was to determine the attitudes of Nebraska superintendents regarding the relative importance of music in the curriculum. A questionnaire was devised and sent to a random sample of 80 Nebraska superintendents in K-12 districts. Eighty percent of the superintendents responded. While superintendents generally find the arts valuable, they are also among the most likely of subjects to be cut due to the tax lid enacted by the Nebraska Legislature, and eighty percent of school districts responding anticipate having to make program or staff cuts in the near future. Superintendents resoundingly agreed that the four "core" courses in the Nebraska State Department of Education Model are not the only things a student "must" know in order to be considered educated, and indicated an education should include a "well-rounded experience of study" including among other subjects, the arts.

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Dedication

To my Mother, Esther, and my Father, Francis,

who raised me in a house full of music; and

to my Gram, Clare Jacobi,

who taught me how to sing.

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Chapter 1

Introduction

In recent years, evidence supporting the theories that music has a power beyond aesthetics has been building. Articles in *USA Today, Newsweek Magazine,* and books like Campbell's *The Mozart Effect* have focused some national attention on how human beings are affected by music.

The idea that music is a powerful tool in regard to man's thoughts and actions is not new. This notion is discussed in the writings of the great Greek and Roman philosophers and has been echoed in writings throughout time from then until now. In our current educational system, though we follow a model similar to that of the Greco-Roman idea of education, we do not adhere to their tenent that music should be a part of the core of a school's curriculum.

In his paper, I will explore education in Greek and Roman societies, considering their establishment of the Seven Liberal Arts and their inclusion of music in the "seven" because of its power and shaping force, and will explain the evolution of music in the curriculum of schools in the United States. I will then consider recent scientific studies of the effect of music on the mind which validate many of the philosopher's assertions regarding music.

The study of the Greek and Roman methods of education will establish reasons why the great philosophers believed music was an essential part of the curriculum. These reasons will vary from the Doctrine of Ethos (the belief that

different types of music have different effects on people); to the theory that there is a "music of the spheres" (the theory that the planets have their own, inaudible "music" which affects man); to Mathematics and Science (the assertion that music is a branch of mathematics whose elements can be computed). A review of current studies on the mental and physiological benefits of music is necessary to link the philosophies of the past to the science of the present.

Consideration of the literature which establishes music as a valuable part of the curriculum and the connecting information regarding the actual benefits of the study of music leads to the question "Why does music appear to be in such a precarious position in our school curriculums today?"

Questions to be answered will include:

1) Is music actually in a precarious position in schools?
2) If music is in a precarious position, *how* precarious is it? How would those who lead schools rank music in importance, relative to other subjects?
3) Given the current brain research and the historical basis of inclusion of music in the curriculum, should schools and states include music as part of the core curriculum?

The purpose of the study is to determine the attitudes of Nebraska Superintendents regarding the relative importance of music in the curriculum. A questionnaire was sent to superintendents in K-12 districts to ascertain their

attitudes toward the state's core curriculum, the inclusion of the arts in the curriculum, and their predictions regarding the effect that the $1.10 and $1.00 tax lids (enacted recently by the Nebraska Legislature to lower property taxes) will have on their schools.

Chapter II

Related Literature

Music in Greek and Roman Societies

Pythagoras precedes Aristotle and Plato in his theories and writings, and is commonly considered to have been an influence upon these men in the formulation of their own philosophies. Pythagoras was born around 570 B.C. and is known as the first man in history to refer to himself as a "philosopher." He is generally thought of as the person who discovered the musical intervals and is certainly known for his experiments with the monochord (Guthrie, 1997, p. 20-24). Pythagoras experimented with a string on a sounding box and discovered that, when plucked, a string "vibrates as a unit. Then, in two parts, then in three parts, four and so on. As the string vibrates in smaller parts, higher tones are produced, this being the so-called harmonic overtone series" (p. 25).

Music was seen by Pythagoras as a part of the study of "Number." "He divided the study of Number into four branches which may be analyzed in the following fashion: Arithmetic - Number in itself; Geometry - Number in space; Music or Harmonics - Number in time; Astronomy - Number in space and time" (p. 34). Pythagoras also asserted that there is a music of the spheres and that each planet has different musical ratios (Guthrie, p. 242).

The organization of the Pythagorean school was not what education would be in the time of Plato and Aristotle, but Pythagoras had his students learn

the "distinctive nature of everything" (p. 77) including the four branches of study previously mentioned. The students of Pythagoras were more like disciples than students in the modern sense.

The Greeks who followed Pythagoras regarded music in three different ways: (1) as an abstract science, a branch of mathematics whose elements could be computed; (2) as a power, a force capable of influencing both the individual and the state; and (3) as an art, to be understood, enjoyed and practiced by citizens as intelligent amateurs but not as professionals (Stolba, 1990). In the education of Athenian children, the Grecian curriculum was divided into the training of the mind and the training of the body. These are commonly translated as *music* and *gymnastic*. In historic Greece, music was an essential part of the education of every free man. The great Greek philosophers Plato and Aristotle wrote extensively about the inclusion of music in education (Dobson, 1963).

Greeks believed music was important in the development of the character. Plato believed the study of rhythm would help form orderly habits. In Plato's *Protagoras,* Socrates advises:

> The teachers of the lyre take similar care that their pupil is temperate and gets into no mischief; and when they have taught him to use the lyre they introduce him to the works of the lyric poets, which they set to music, and made their tunes and rhythms familiar to the children's souls in order that

> they may be more gentle and harmonious and rhythmical, for the life of every part has need of harmony and rhythm (p. 325-6).

In *The Republic,* Plato assigns personal characteristics to different rhythms: slavishness, insolence, madness, heroism; and says that "good words, good harmony, good grace, and good rhythm follow from the good order and disposition of the soul . . . a soul in which reason has been educated to govern in goodness and truth" (trans., 1985, 400b-3).

Plato believed that in performing or taking pleasure in music we assimilate our own characters to that associated with music. This argument rests on Plato's concept of *mimesis* (Stalley, 1983, p. 127) where one likens oneself to someone else in voice or gesture. He suggested that modes should "best convey the spirit of men who are temperate and brave in both success and failure" (trans., 1985, 393c) and suggests forbidding the use of modes which suggest inappropriate or sad behavior. Plato considers poetry and music to be of major importance in education.

> Rhythm and harmonies have the greatest influence on the soul; they penetrate into its inmost regions and there hold fast. If the soul is rightly trained, they bring grace. If not, they bring the contrary. One who is properly educated in these matters would most quickly perceive and deplore the absence or perversion of beauty in art or nature. With true good taste he would instead

> delight in beautiful things, praising them and would himself come to be beautiful and good (Plato, trans. 1985, 4013).

Plato also believes that disorder in music would lead to lawlessness (Stalley, p. 127). Plato's Megillus in *The Laws* asserts that with the passage of time poets became rulers and confounded everything (trans., 1980, 700d).

> In their mindlessness they involuntarily falsified music itself when they asserted that there was no such thing as correct music, and that it was quite correct to judge music by the standard of pleasure it gives to whoever enjoys it, whether he be better or worse (700e).

Aristotle in *The Politics* devotes almost the entirety of Book VII to discussing the inclusion of music as a major branch of education. Aristotle writes that music is noble and should therefore have the first place in education. He suggests that a person may be well trained physically, but that makes them useful in one quality only and therefore proves them to be inferior to others (trans., 1988, p. 1338b25-30). Aristotle describes music as pleasant, as being able to conduce excellence, and as contributing to leisure and mental cultivation.

Like Plato, Aristotle discusses the imitative nature of music: "Rhythm and melody supply imitations of anger and gentleness, and also of courage and temperance, and of all the qualities contrary to these, and of the other qualities of character, which hardly fall short of the actual affections, as we know from our

own experience, for in listening to such strains our souls undergo a change" (trans., 1980, p. 1340b17-10).

Aristotle concluded that "music should be studied, not for the sake of one, but of many benefits:" education, purgation, intellectual enjoyment, relaxation, and recreation after exertion (trans., 1980, p. 1341b35-41)

Other Greek and Roman philosophers wrote about the justification of music in education:

> Plutarch thought music should be studied on account of its influence on the emotions though it also has an intellectual aspect (Dobson, p. 88)

> Cicero was the first to apply the term *liberal arts* to a list of seven courses: philosophy, mathematics, music, literature, rhetoric, geometry, and astronomy (p. 127).

> Boethius first named the *quadrivium* which comprised music arithmetic, geometry, and astronomy (p. 161). Boethius, like the Greek theorists, divided music into three categories: (a) *musica mundana*, the macrocosm, the inaudible music of the spheres discernible in the orderly movement of the planets and the stars; (b) *musica humana,* the inaudible harmonious rela-

tionship between soul and body influenced by the order of the cosmos and comparable with musical consonance; and (c) *musica instrumentalis,* the microcosm, the audible sounds called "music" which instruments produce (including the human voice) by means of the orderly application of acoustical principles" (Stolba, p. 25).

Martinaus Capella mentioned the curriculum divided into the *trivium* and *quadrivium.* The trivium included grammar, dialectic and rhetoric; the quadrivium was the same as Boethius listed (Dobson, p. 161).

Ptolemy said that the universe was bound together by "mathematico-musical principles" (Stolba, p. 13).

In his conclusion to *Our Debt to Greece and Rome,* J. F. Dobson states: The true solution [to what to offer in education] lies in a compromise. Trivium and Quadrivium should both have their place; thus we keep the spirit of the medieval system though we changed the content of the courses; but education should be as broad as possible, and should not be condemned because it does not seem *prima facie*, to equip youth for any specialized

> business or vocation. In the long run, those who have received a liberal education will in most cases outstrip those who lack it. We are coming round again to the Greek view that the best preparation for citizenship lies not in any specialized training, but in an all-around development of the mental faculties (p. 189, 190).

In education, we have "come round" several times to a "back to basics" theme; to answering the question "What should be in the core of our curriculum?" One could infer from our current back to basics movement that the definition of basic has evolved to mean the development of specific mental faculties (reading and writing, math, science and social studies), rather than the development of all mental faculties. The Greeks and Romans considered music as an integral part of their curriculum, understanding its many benefits. In addition, the study of the history of education in America reveals much information regarding the importance and inclusion of music in the curriculum.

Music and Education in the United States

"The American colonists had no institutions [to enable music training] and were forced to set up singing schools in the interest of better religious services. The musical life of the nation slowly advanced, and with the establishment of the free public schools, music was incorporated into the curriculum. Music in the schools was greatly aided by pestalozzian principles, by the touring European artists and by improved teacher preparation. The progressive educational movement provided an additional stimulus to school music. During the 20th century the instrumental program made its great advance, allied to the system of class instruction and the school band" (p. 67, Leonhard & House, 1959).

The preceding excerpt from *Foundations and Principles of Music Education* by Charles Leonhard and Robert W. House provides an excellent summary of the historical foundations of music education in the United States.

Singing Schools

While Saint Cecilia is the patron saint of musicians, the "church is the patron saint of music education in America" (Sunderman, p. 8, 1971). There existed on this continent, schools which included music as early as 1603 (p. 8). These were missionary schools and were established in what is now known as Florida, Texas, Louisiana, and New Mexico. Run by Franciscan Friars, these schools included vocal and instrumental music, and the teaching of the entire mass and additional chants (p. 8).

"While monastic music education was under the direction of the Franciscans, Ralph Crouch started at Newton, Maryland what is considered to be the first Catholic elementary school to be regularly established in the English colonies. . . .Singing was a part of Crouch's curriculum" (Sunderman, p. 9).

Sunderman further documents that the "first attempt to organize a choir or teach choral singing was on main soil" (p. 9) was led by a priest who learned the Native American languages of the region and translated the mass and associated chants. Father Gabrielle Druillettes taught music to the Native Americans and formed a choir of young men.

The arrival of the English added the new element of Protestant religions to America. The *Bay Song Book* was the second book to be printed in America (Leonhard & House, p. 49). This was a puritan book of psalmody.

The primary concern of all colonists, however, was survival. Because of this, efforts to formally learn music were cast aside in favor of more practical endeavors.

Once the colonists achieved their goal to survive and thrive, they had the time to notice that their singing at services had become less than angelic. By 1721, Reverend Thomas Walter said, congregational singing sounded like "five hundred tunes roared out at the same time, with perpetual interfearings with each other" (Mark, 1996, p. 5). The response to this dilemma was the development of singing schools. In such schools, itinerant singing masters

would meet with local families and teach music courses. "Singing schools were highly regarded because they satisfied both musical and social purposes" (Mark, p. 5). The public enjoyed the socialization and personal enrichment and the church benefited with better musicianship at services.

Public School Music

Lowell Mason was a music educator known for being the first to teach music in a Boston public School (Hawes School, in 1838) and for being the first superintendent of music in the Boston schools. Mason believed that all people deserved an education in music and that the study of music would help schools create well-rounded, happy members of society. He said music can "gild with a mild light the chequered scenes of daily existence" (Mark, p. 6).

The advent of Mason's advocacy was the impetus for the establishment of other avenues of music education. In 1868 the Peabody Conservatory of Music in Baltimore, Maryland was established. In 1870, Lowell Mason unveiled the *National Music Course*. Also in 1870, music was made part of the Philadelphia, Pennsylvania schools' course of study. The Music Teacher's National Association was founded in 1876. *The Normal Music Course* was written by H. E. Holt and John W. Tufts in 1883. In 1885, the Coombs Conservatory of Music was established in Philadelphia (Sunderland, p. 368). All of these developments made the growth of music education possible after the turn of the century.

Early 19th century proponents of music stressed many benefits: pleasure, worthwhileness, the emotional experience, spiritual interpretation of man's inner nature, animating feelings of devotion, elevating and refining diversion, strengthening family ties, and as a therapeutic aid (Sunderman, p. 208, 209). With all of these high-minded benefits it is interesting that one of the first major developments of the early twentieth-century was the creation of school bands. These bands filled more practical purposes. "School authorities found that bands were relatively easy to develop, seemed to foster creative, cooperative group learning experiences, and teamed excellently with competitive sports. . . . The Band soon established its public relations value; it has been a primary point of contact between school and public" (Leonhard & House, p. 57).

Another development was the establishment of the National Music Camp at Interlochen, Michigan in 1928. This camp provided students from many schools the opportunity to gather, form organizations, and receive private instruction. This type of camp flourishes today, and has led to the establishment of all state bands, festival choruses, and the like (Leonhard & House, p.57). The philosophy and purpose of these camps reflect the idea that if members of society find this enjoyable, they will, in turn, desire that it be taught in the public schools.

Education by Committee

The launch of Sputnik in 1957 led to a restructuring of priorities in American education. It was believed that the subjects of reading, writing, and arithmetic were essential, and all other subjects were of secondary importance. This led to what has essentially been a "national debate" on what students need to learn in order to be considered educated.

Beginning in the 1950's and continuing until today, educational edicts have been written largely by committees of "experts" from all fields.

1959 - The Woods Hole Conference

1961 - The National Education Association's Project on Instruction

1963 - The Contemporary Music Project

1967 - The Tanglewood Symposium

1970 - The GO Project

1980's- National Reports

- 1982 - The Paideia Proposal (Adler)
- 1983 - A Place Called School (Goodlad)
- 1983 - A Nation At Risk
- 1983 - High School: A Report on Secondary Education in America (Boyer)

1994 Goals 2000: Educate America Act, including National Standards

1994 - The National Standards in the Arts

All of the above gatherings produced well-written, thoughtfully conceived ideas and philosophies regarding music education. For instance, the Paideia Proposal (*Paideia* is a term which designates the Greek cultural and ethical experience inside and outside of formal education) declared there should be no electives and that fine arts should be a part of the regular curriculum. The Tanglewood document asserted that music should be at the core of the curriculum. Boyer's report stated that the arts are "not a frill" (Mark, p. 22) and the Goals 2000 Act from which the national standards have arisen asserted that music is part of the core curriculum.

These documents lead us to today. American attention to music education has ebbed and flowed since colonization. Many committee reports and lone authors assert that music should be a major part of every child's education. Many authors of music philosophy argue for its inclusion based on reasons ranging from purely aesthetic to purely utilitarian. Whatever the reason, we clearly have enough data to support either claim or both.

Music and Physiological Research

In addition to the many assertions and philosophies of the fine arts and music education communities, scientists are discovering the physiological explanations of what happens when one listens to or performs music, and their discoveries are confirming that music has a positive effect on humans, more beneficial perhaps, than even the Greeks, Romans, American philosophers of music, or music educators suspected.

Currently the body of information regarding the many ways which music affects the mind continues to grow. Many of these scientific studies, case studies, and personal stories serve to validate what philosophers have written and music educators have asserted regarding music.

Two books that include compilations of studies are *The Mozart Effect* by Don Campbell, and *Superlearning 2000* by Sheila Ostrander and Lynn Schroeder.

Frances H. Rauscher's study at the Center for Neurobiology of Learning and Memory in Irvine California, has been called "another Rosetta Stone" (Campbell, 1996, p. 15). Rauscher states:

> In a study . . . called the 'Mozart Effect,' Gordon Shaw, Ph.D., and I concluded that compared to those who simply sat in silence or listened to realization instruction, 36 college students who listened to ten minutes of Mozart's Piano Sonata K-448 subsequently experienced

> a significant increase in their spatial IQ scores. This study reiterated our conclusion. . . in a 1993 study in which we found that the spatial reasoning performance of preschool children who received eight months of music lessons far exceeded that of a [control group] in that the relationship between music and spatial reasoning is so strong that simply listening to music can make a difference (Rauscher, 1996, p. 46).

One of the researchers on the project suggested that Mozart's music may "warm up the brain. We suspect that complex music facilitates certain complex neuronal patterns involved in high brain activities like math and chess" (Campbell, p. 15).

Rauscher asserts that music "has been praised by history's greatest human minds [including] Shakespeare, Beethoven, Goethe, Plato, Luther, and Einstein" (Rauscher, p. 46) and "yet, as a subject in American schools, music is rarely regarded with such esteem" (p. 46). She questions why, despite the findings of her studies and others', schools continue to eliminate music programs. Rauscher states "music should be prized and emphasized as an invaluable way to boost human brain power" (p. 46).

"Music lessons coupled with a special computer program significantly increased the math skills of children at an inner-city elementary school" a study by Gordon Shaw indicates (1999, March 15). Shaw, a professor at University of California, Irvine, headed the four month project which included 136 second

grade students at the 95th Street school in Los Angeles. He used a computer program that "included spatial exercises such as assembling pieces of a puzzle and arranging geometric pieces in particular orders". Coupled with lessons in note and rhythm reading, the students scored 27% higher than second graders in similar schools in the same county who were given only computer program and traditional math teaching. Shaw reports "The learning of music emphasizes thinking in space and time. When children learn rhythm, they are learning ratios, fractions and proportions."

Researchers at the University of Texas at San Antonio recently reported on a "new imaging research that analyzed music's influence on the brain and found that expert musicians use widely dispersed, interconnected brain areas when they intently listen to different aspects of a piece of music including its rhythm, melody, and harmony" (Teaching Music, 1999, p. 51). Researchers discovered that the left part of the brain, which interprets written letters or words, corresponds to the right half of the brain which interprets written music. "The findings . . . show that the structure of music and people's use of it are similar in key respects to language structure and use" (p. 51).

In *Superlearning 2000*, the authors reported that researchers in the Soviet Union found that it is the slow tempo section in Baroque concertos that facilitates the learning effect. The tempo in the slow section (largo) is 55-65 beats a minute.

> As the largos play, your blood pressure relaxes and lowers, and your heart beat slows to a healthy rhythm. Stress factors in your blood drop, probably enhancing your immune system. At the same time EEG monitors reveal that your brain waves are changing. Your fast, beta waves eventually decrease by 6 percent and the alpha brain waves increase by an average of 6 percent. The right and left hemispheres of your brain become synchronized . . . The music has induced a powerful form of alert relaxation in you -- relaxed body, alert mind – an ideal state for optimal accomplishment. Physiological research shows that in a calm state your body functions more efficiently on less energy, which means more energy available to your brain (Ostrander, 1994, p. 68).

In his book *The Mozart Effect,* Dr. Donald Campbell lists a "medley" of ways music affects us (pp. 64-77):

> Music can increase endorphin levels. Studies have indicated that those who listen to music during childbirth require no anesthesia because the music increased endorphin release.

> Music can regulate stress-related hormones. Anesthesiologists report that the level of stress hormones in the blood declines significantly in those listening to relaxing, ambient music – in some cases replacing the need for medication.

Music and sound can boost the immune function. Just listening to music for fifteen minutes can increase physiological functions associated with the immune system. The evidence for this phenomenon goes beyond the scope of this study.

Healing Effects

At the national level, the Senate Committee on Aging held hearings in 1996 on the beneficial use of music therapy to consider funding for helping the elderly recover from various illnesses. Among those called to testify was Dr. Oliver Sacks, well known neurologist (portrayed in the movie "Awakenings") who testified that "music was not a luxury, but more of a necessity, that may be required to help patients express their emotions and feelings" (Rosch, 1996, p. 2).

In France, the eminent ear specialist, Alfred Tomatis has made music the focus of his healing procedures. Dr. Tomatis discovered that humans derive energy from high frequency sounds. He also discovered that impairments in hearing makes high-frequency hearing impossible. (He notes as an example that 60 percent of incoming college freshmen as long ago as 1982 had significant high-frequency hearing loss – on par with retirement age men's hearing abilities.)

Tomatis investigated research that indicates "two-thirds of the inner ear's cilia – the thousands of tiny hairs that lie on a flat plan like piano keys – resonate only at the higher 'musical' frequencies (3,000 to 20,000 hertz.)" (Campbell, p. 114). Tomatis has invented an Electronic Ear which emits bursts of varied high/low frequency sounds which "opens" the ear so it can hear the higher frequencies. "Sound frequencies from 5,000 hertz to 8,000 hertz recharge 'brain batteries' most rapidly. . . .After reviewing the music of many composers, Tomatis found that the music richest in these ultrahigh frequency recharging sounds is Mozart's" (Ostrander, p. 94). Tomatis actually filters the Mozart to amplify some frequencies and eliminate others. He asserts that because of the "balance" of Mozart's music, it works better than any other kind of music he has incorporated (Campbell, p. 19).

Billie M. Thompson, Ph.D., describes the Tomatis method:

> It's the inner ear's ability to integrate information that makes it so important in motor control, communication, and learning. Listening Integration works for people of all ages for both correction and enhancement. . . .His method of sound stimulation affects the entire nervous system, creating more balance. The vagus nerve, which connects first with the ear drum and then to all the organs in the body is stimulated. The sounds develop new pathways in the brain, which create more options and flexibility in perception. In the Tomatis

> Method, sound is presented to a listener through bone and air conduction through a patented delay that allows the listener to become more easily attuned and more discriminative of the sounds presented (Thompson, 1994).

Ostrander (1994) concludes her "Secret Ingredients In Music" chapter, stating that: "Tomatis's breakthroughs have already improved the lives of hundreds of thousands world wide. . . . It would not have been surprising to the musicians/physicians of ancient times, nor perhaps will it be to Superlearners of the 21st Century" (p. 99).

At the Tomatis Center in Ontario, parents of children with documented learning problems graded the result of the training at the center and said they saw improvement in their children in: Communication (89%), Attention Span (86%), Reading Comprehension (85%) and Quality of Speech (74%), among other items ("Tomatis Center Research", 1996).

The February 3, 1995 issue of SCIENCE included an article about the neurology of perfect pitch. It stated that perfect pitch seems to be a left-brain function. Researchers at Dusseldorf's Heinrich Heine University used magnetic resonance imaging to compare the volume of the right and left plenum temporal in 30 right-handed professional and 30 right-handed non musicians, matched for age and sex. The asymmetry of the left plenum temporal was greater among the

musicians – particularly the 11 with perfect pitch who showed three times as much left-right asymmetry as the non musicians.

Music and Physical Forms

Validating the idea that there is a "music of the spheres," is a story related by a printer in Munich, Germany. This printer noticed his presses inexplicably turned out messy work once in a while. In trying to establish a pattern, he discovered that his presses went awry ahead of stormy weather. He concluded that the messy work was due to electromagnetic impulses generated by the earth which created a sound frequency that blurred the protein gel on the press cylinders. In addition, this gentleman made another discovery: "He found that these electromagnetic bursts thrown out by the earth correspond to the musical scale. 'They are quite clearly in simple numerical relationship to each other, corresponding to the octave, the fifth, the fourth, the third, etc., in the field of sound'" (Ostrander, p. 90).

Ostrander goes on to say "Proteins live and resonate in us. Two distinguished German scientists independently observed that DNA and RNA resonate to an octave tone of the earth's rotation pattern, one of many scientific examples that our flesh and blood is tuned to universal resonance" (Ostrander, p. 90).

Similarly, the "Gongmaster" Don Concreaux advocates "gong baths" in which the subject "wallows in the waves of sound that crash over you" (Chapman, 1997, p. 35). He bases the tone of his gongs on the vibration frequency of each planet. "The underlying philosophy is that because the gong covers the full spectrum of sound, it vibrates all the body's cells, bones and organs" (p. 35) thus creating a sort of harmony in the body. In testimonials, people said this "sound bath" helped them reach a relaxed state of being and mind.

If our very DNA resonates in tune with the earth, it is not a far stretch to assert that music can be a positive influence physiologically.

Anecdotal Evidence

To illustrate that music is a powerful catalyst to healing, Campbell presents a cross-section of studies, reports and miracle stories. Among them: Alzheimer's patients "awakened" for short periods of time and were able to communicate either by singing, or by actually talking with their loved ones when they listened to music from their past.

> Two female volunteers with breast cancer were taught to tone with the [entire] scale -- using a violin to keep a base note – for twenty-one minutes at a time. [The time has to do with 7 minute cycles in our body.] They spent 3 ½ hours a day at this, and did it regularly for a month.

> That's a lot of toning. One woman's tumor disappeared completely. The other had agreed before hand with her husband to have surgery, whether she had musical therapy or not. In the hospital, surgeons found her tumor reduced and completely dry. There were no metastases. The malignant part was removed and the cancer never came back (p. 243).

A purely personal and anecdotal story arose from research for this thesis. My cousin Maggie is studying for her degree in education at Arizona State, and as part of her coursework, she was working with an autistic child named Ryan. In a flurry of letters back and forth with Maggie's mother, I related that there was a Tomatis Institute in Phoenix and wondered whether Ryan's parents had investigated this treatment possibility. They had, and the expense ($3,000 to $4,000) was prohibitive. I mentioned an alternative treatment, based on Tomatis's research which used a special tape and "walkman," and forwarded a copy of the information to them through Maggie. Ryan's parents purchased the treatment device and reported shortly thereafter a breakthrough in communication with Ryan.

Whatever its ramifications, the scientific and anecdotal evidence supporting the power of music is compelling. In education, music can be used to teach beauty, to learn about cultures, and as a leisurely, pleasurable activity. Today these uses are as valid as ever. However, administrators would do well

also to investigate the idea that music has a power beyond pleasure; that it can physiologically mold students into higher level thinkers.

Mozart asks in *The Magic Flute* "How powerful is your magic sound?", perhaps we can now answer: remarkably powerful.

Summary

Music in Greek and Roman Societies

Plato, Aristotle, and other Greek and Roman philosophers wrote extensively about the benefits of studying music. They believed that beside the pleasure of listening to music in leisure, music also had the power to mold the character of society's citizens. They believed that in order to have men who were well-rounded, music must be a part of their education. They also believed that music was a scientific and mathematic subject to be explored and explained in precise computations. Therefore, the culmination of these ideas was the establishment of the "Seven Liberal Arts" which included music as part of its "core." The Greeks and Romans believed music was science and mathematics, leisure, and character-builder all rolled into one important subject.

Music Education in the United States

There has been a long history of including music in the curriculum in the United States based on Greek and Roman ideals. Beginning with Catholic schools and eventually moving to the public schools, music has been a part of the curriculum. Within the last thirty years, many different groups have gathered

and created documents asserting the positive effects of the study of music. Some of these gatherings and documents include the Contemporary Music Project, Paideia Proposal, Tanglewood Symposium, A Nation at Risk, The National Standards, and the Nebraska Frameworks for the Arts. All of these symposia and documents asserted the need to include music in the curriculum, and the need for the nation to support the fine arts.

Music and Physiological Research

Frances Raucher's ground breaking research on the study of the affect of music on testing abilities has led to other studies and a tumult of popular public speculation on the benefits of the arts. Other research includes documentation of the physiological changes which a body undergoes during the act of listening to music. This research also concludes that there are "brain benefits." New research identifies clearly that music enhances neuronal functions and physiological reactions.

Healing Effects of Music

Music therapy has been used in many different venues. It has shown to be beneficial to the elderly, to adults and children alike. With increased ability to watch the brain, studies identify which parts of the brain actually control musical abilities such as perfect pitch. In addition, the idea that there is a music of the spheres is supported by those at the edge of music therapy and those who understand the resonation of DNA molecules. Toning has also been shown in

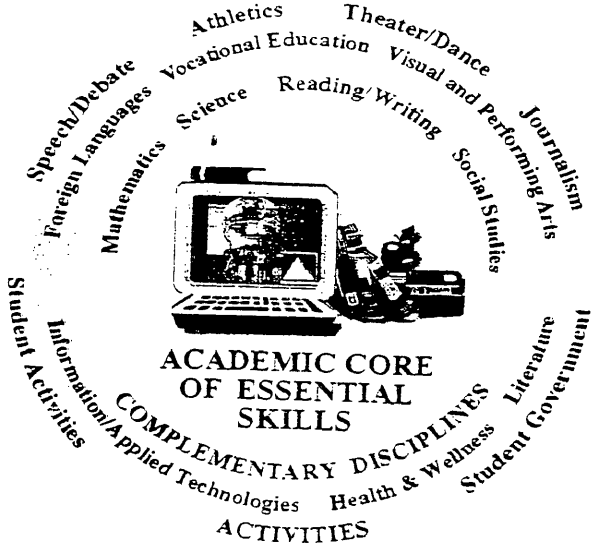
anecdotal evidence to help healing. Music has been used successfully in helping those dealing with physical and mental diseases.

Chapter III

Method of the Study

Introduction

The Nebraska Department of Education has currently enacted a new "Core Curriculum" model, and the Nebraska Legislature has passed a law that includes a tax lid which will affect state funding of schools. In the core curriculum model, the arts are considered a "complimentary discipline". The Nebraska Core Curriculum model includes a core of four "must know" courses including math, reading/writing, science, social studies, and an outer circle of "should know" courses, including visual and performing arts, literature, information/applied technologies, health and wellness, foreign language and vocational education.



In addition, the new Nebraska tax law established a $1.10 tax lid by 2001, and a $1.00 lid thereafter. The law, 77-3442, under Article 34 Political

Subdivisions, Budget Limitations, states "Property tax levels for the support of local government for fiscal years beginning on or after July 1, 1998 shall be limited to the amounts set forth in this section except as provided in Section 77-3444. School districts and multiple district school systems may levy a maximum levy of (I) one dollar and 10 cents per one hundred dollars of taxable valuation of property subject to the levy until fiscal year 2001-2002 and (II) one dollar per one hundred dollars of the taxable valuation of property subject to the levy for fiscal year 2001-02 and all subsequent fiscal years" (Revised Statutes of Nebraska, 1995). With this law, many school districts may be facing the prospects of having to eliminate programs or staff because of funding shortfalls. These two issues, in tandem with the evidence regarding the necessity of including music as a core subject, create an intriguing situation which may affect the future of music programs in Nebraska schools.

In order to assess current attitudes, a questionnaire was sent in February, 1998, to randomly chosen superintendents in Nebraska. I was interested in knowing the current attitudes of superintendents regarding the newly adopted state core curriculum model, and how superintendents viewed Visual and Performing Arts in relation to other courses. Superintendents in Nebraska were the focus of the questionnaire, given the economic pressures of the 1998 Nebraska Legislature tax lid law, which will very likely limit income to school districts. Only superintendents in K-12 school districts were surveyed. I was

interested in how school districts would compare to one another regarding their ranking of Visual and Performing Arts courses, and in discovering whether there would be any noticeable agreement regarding the ranking of courses listed in the state's curriculum document. The main aspects to be considered were: 1) how superintendents would rank courses; 2) the level of importance superintendents ascribe to Visual and Performing Arts in their overall curriculums 3) the superintendents' opinion regarding the newly established core; 4) whether superintendents were anticipating the need to make cuts because of finances; and 5) where cuts, if necessary, would take place. An additional aspect was to discern whether superintendents themselves could explain their own philosophical view regarding just what should be considered an "education." It was hoped that the findings of the questionnaire would enable the reporting of facts (for instance *how many* superintendents believe the "core" are the only subjects a student must know in order to be educated) and to lead to interpretation of the data (for instance, the arts are ranked low in importance and high regarding danger of being cut; what does this mean for visual and performing arts educators?).

Population Sample and Questionnaire Format

Sample

80 superintendents were chosen in a systematic random sampling from a list of Nebraska Superintendents (N=220) who were in K-12 districts. The districts varied from small town to consolidated, to urban districts. Eighty percent of the superintendents responded to the questionnaire (N=64).

Questionnaire

Superintendents were asked to complete a broad range of responses including the following topics: ranking classes from 1 (most important) to 10 (least important); stating opinions regarding Nebraska's Core Curriculum Model; ranking classes to be cut from 1 (least likely) to 10 (most likely); describing the study of music in the district; rating the importance of the arts to themselves personally, and to their communities; and defining an "educated person."

Format

The questionnaire items included both "closed form" (permitting only prespecified responses) and "open form" (respondents could make any response they wish). Four Likert scale questions were posed, and two ranking questions were posed. Four questions required "yes" or "no" responses. Two questions required the respondent to "check those that apply" and two questions allowed the respondent to answer in his own words. (See Appendix A.)

Pilot Testing

The instrument was administered to five educators and two businessmen in order to improve the clarity and quality of items. The pilot test indicated that the instrument was clear and understandable to both those involved in education and those outside of it.

Response Rate

To ensure an adequate response, the cover letter and instrument were sent on University of Nebraska at Omaha (UNO) letterhead and envelope stationery from the Department of Educational Administration and Dr. Martha Bruckner's (Department Chairman) office. In addition, the return envelopes were postage paid UNO return response envelopes.

Because it was determined that 64 was an appropriate representation of 80 superintendents, no official follow-up letters were sent. There were, on two occasions, the opportunity for either Dr. Bruckner or myself to discuss the questionnaire with superintendents known to have received it. One of these superintendents returned the questionnaire; the other did not, and specified his reasons privately for his actions.

On the return envelopes, the name of the school responding was already indicated, otherwise, the responses were anonymous. There were some superintendents who signed their names and wrote additional comments on their questionnaires.

Analysis

To analyze the questions in which superintendents were asked to rank in order of importance, clusters of rankings were identified. For instance, superintendents varied most in their ranking of literature, however, a cluster of 15% ranking it 5th, 19% ranking it 6th, and 17% ranking it 7th indicates that literature falls in the middle to lower ranking in level of importance. Restated, it could be said that 51% of superintendents ranked Literature in the middle to lower ranking of importance. Answers to the open ended questions were analyzed for content and compared for similarities and differences. The remaining analysis included reporting of fact regarding how the respondents answered certain questions.

Chapter IV

Results

The purpose of this study was to determine the attitudes of Nebraska superintendents regarding the relative importance of music in their respective curriculums. A questionnaire was sent to a random sample of superintendents in K-12 districts to ascertain their attitudes toward the state's core curriculum, the inclusion of the arts in the curriculum, and their predictions regarding what effect the $1.10 and $1.00 tax lid (enacted by the Nebraska Legislature to lower property taxes) will have on their schools.

Nebraska's core curriculum was established by the State Department of Education. It delineates an academic core of basic knowledge and skills (Reading/Writing, Math, Science, Social Studies), complementary disciplines (Foreign Languages, Vocational Education, Visual and Performing Arts, Health and Wellness, Literature, Information and Applied Technologies) and activities (Student Government, Journalism, Theatre/Dance, Athletics, Speech/Debate, Student Activities).

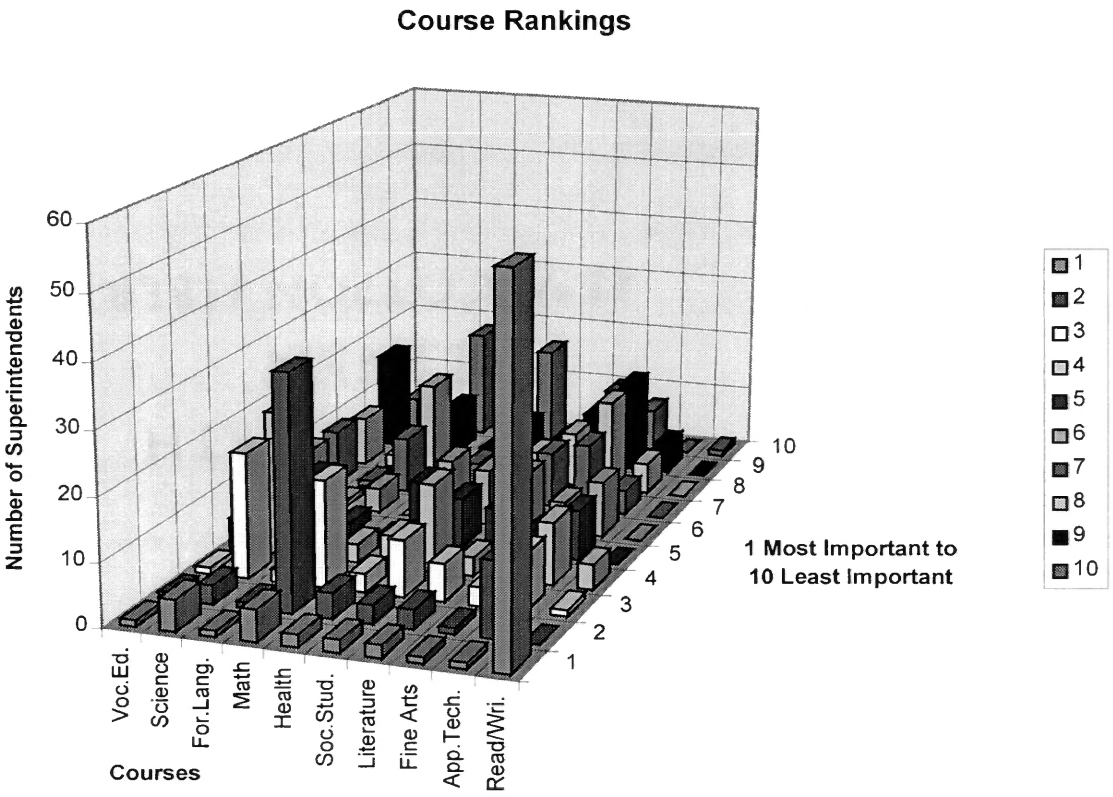
Questionnaires were mailed to 80 superintendents. The superintendents were chosen in a systematic random sampling, from the list of all Nebraska superintendents (N = 220) in K-12 school districts. Because 80% of the superintendents returned their questionnaires, and this number of respondents

was determined to be representative of the population of superintendents surveyed, no follow-up mailings were administered. On two separate occasions, there was an opportunity to question in person a superintendent who had not returned the survey. One superintendent subsequently returned his survey, and the other chose not to, and specified his reasons in a private conversation.

Ranking Importance

In Table I, the rankings of all courses is illustrated in bar graph form. The number of superintendents responding is indicated at the left side of the graph. The courses they ranked are indicated at the bottom and their ranking is indicated on the right. Each bar indicates the number of superintendents ranking a particular subject at a particular level (1 being most important – 10 being least important) .

Table I



For the questions in which the superintendents ranked their responses, it was possible to determine clusters of numbers. For instance, fifty-eight superintendents ranked reading as #1, zero as #2 and one as #3; five superintendents ranked math as # 1, thirty-seven as #2, and seventeen as #3.

Table I indicates that most superintendents (58 out of 64) ranked reading/writing as the most important subject. Math, it can be seen, ranks a strong second with 37 superintendents ranking it as second in a ranking from

one (most important) to ten (least important). Science is also ranked high in importance as 23 superintendents ranked it third and 24 ranked it fourth.

Though the angle makes it difficult to see the ranking of all of the courses, the table demonstrates well the variance of ranking in all subjects. There are only a few bars which are conspicuous in their height; these include Reading, Math and Science. The remaining bars on the table make evident the fact that superintendents are not of one voice in their opinions regarding the importance of these subjects.

The data contained in Table I includes the following:

The subject Reading/Writing was ranked first by 58 superintendents, third by one, fourth by four and tenth by one superintendent. No superintendents ranked reading as second, fifth, sixth, seventh, eighth or ninth.

The subject of Math was ranked first by five superintendents, second by 37 superintendents, and third by 17 superintendents. It was also ranked fourth by three, and ninth by one superintendent. No superintendents ranked math as fifth, sixth, seventh, eighth or tenth.

Science was ranked first by five superintendents, second by three, third by 20, fourth by 23, fifth by nine, sixth by one, seventh by one, and eighth by two. No superintendents ranked science ninth or tenth.

The subject Social Studies was ranked first by two superintendents, second by three, third by nine, fourth by 14, fifth by 8, sixth by 9, seventh by 8, eighth by five, ninth by three and tenth by two superintendents.

The subject Literature was ranked first by two superintendents, second by three, third by six, fourth by three, fifth by seven, sixth by nine superintendents, seventh by nine, eighth by nine, ninth by nine and tenth by 10 superintendents.

Vocational Education was ranked first, second, and third by one superintendent each, fourth by five superintendents, fifth by nine, sixth by nine, seventh by nine, eighth by eight, ninth by 16 and tenth by five superintendents.

Foreign Language was ranked first by one superintendent, second by one, third by two superintendents, fourth by three, fifth by two, sixth by four, seventh by nine, eighth by 15, ninth by 8, and tenth by 18 superintendents.

Health and Wellness was ranked first by two superintendents, second by four, third by three, fourth by five, fifth by 10 superintendents, sixth by 10, seventh by six, eighth by three, ninth by six and tenth by 16 superintendents.

Visual and Performing Arts were ranked first by one superintendent, second by one, third by three, fourth by one, fifth by four, sixth by five, seventh by 11 superintendents, eighth by 15, ninth by 15 and tenth by 7 superintendents.

The subject Information/applied Technologies was ranked first by one superintendent, second by 12, third by nine, fourth by ten superintendents, fifth

by eight, sixth by nine, seventh by four, eighth by five, and ninth by five superintendents. No superintendents ranked this subject as tenth.

Though superintendents individually ranked reading as #1 (91%) and math as #2 (53%), and generally ranked between one and five reading (92%), math (92%) and science (81%), an overwhelming majority of them responded that the core courses in Nebraska's model are not the only subjects a student must study (92%). The pie chart in Table II vividly illustrates that superintendents question the concept of a core-only curriculum.

Table II

Do you consider the NE "Core" the only subjects a student must study to be considered educated?

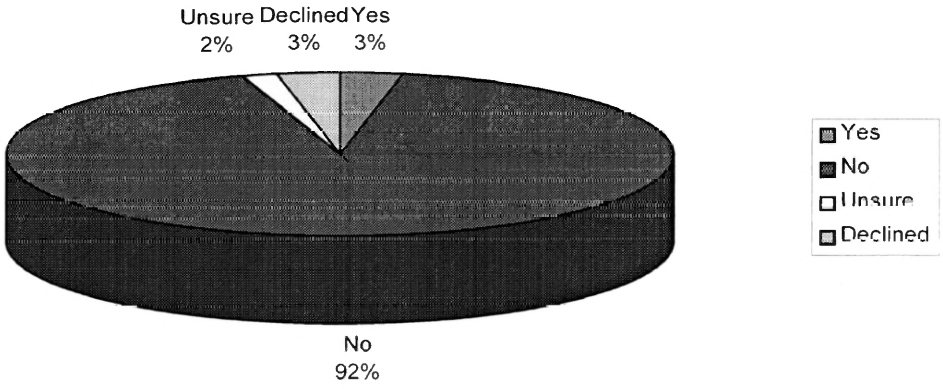
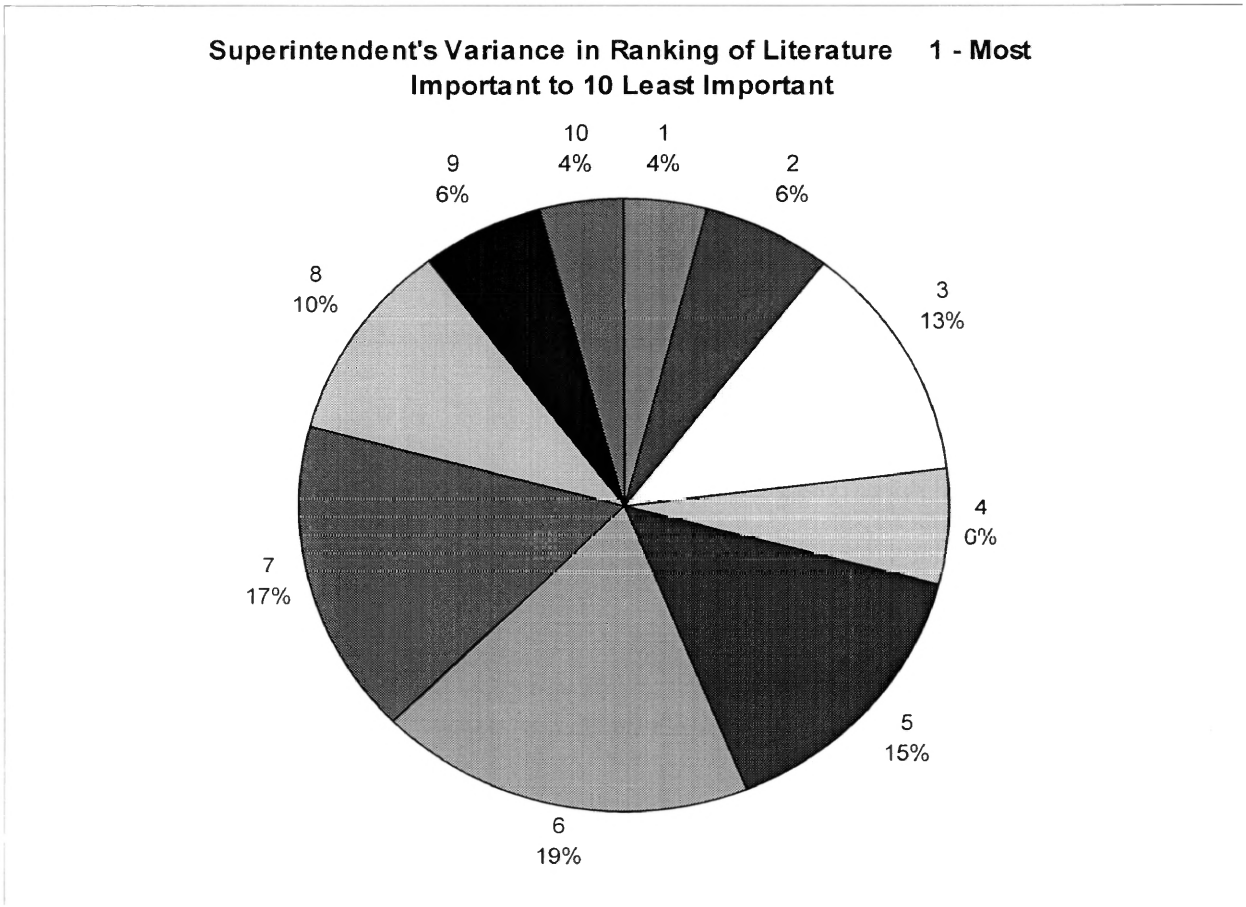


Table II shows that 92% of superintendents declined to support the notion that the core delineated by the Nebraska Department of Education are the only courses a student "must know" (state document language) to be considered educated. Two percent responded they were unsure whether these were the only courses a student must know, and 3% responded they believed that the core included the only thing a student "must know" to be considered educated.

In general, superintendents ranked reading, math, science, social studies, and information and applied technologies as the five most important subjects. Subjects ranked as less important were health and wellness, visual and performing arts, vocational education, literature, and foreign language. Literature produced the widest variance in ranking. Seven superintendents ranked it as 5th, nine as 6th, nine as 7th, nine as 8th, nine as 9th, and ten as 10th.

Table III



As can be seen, superintendents varied greatly on their opinion of where literature should be ranked. Table III indicates that the biggest "cluster" in ranking can be found between 5 and 7 (in a ranking of 1 "most important" to 10 "least important").

Ranking to Eliminate Courses

Superintendents were asked which subject would be most likely cut should they be forced to do so. These data were less clear than the previous

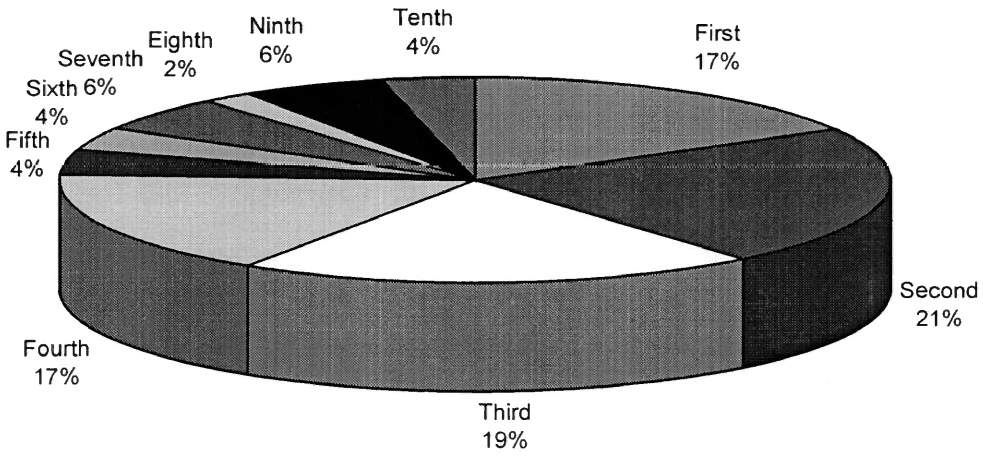
question because it appeared the scale was misread by some. In addition, several superintendents created their own scales as in choosing a "top 4" list of courses and neglected to rank the remaining courses. Several superintendents appeared to rank the scale backward (for instance, they ranked reading as first to be cut). If their scale was obviously backward, their responses were reconfigured to match the correct scale. If the superintendents disregarded the scale entirely, their responses to this question were not included in the data.

Though health and wellness fell in the mid-range (5-7) in importance on the first question, it falls in the upper range (1-3) of courses likely to be cut.

Visual and Performing Arts ranked among the most likely to be eliminated. Table IV displays how the superintendents ranked Visual and Performing Arts.

Table IV

Visual and Performing Arts Ranking
From First (Most Likely) to Tenth (Least Likely) to be Cut



As Table IV illustrates, 17% of superintendents indicated that Visual and Performing Arts would be their first choice to cut if the elimination of courses was deemed necessary. 21% of the superintendents indicated Visual and Performing Arts would be second in ranking of 1 most likely to 10 least likely to be cut, 19% ranked it third, and 17% ranked it fourth. Stated in another manner, 74% of the superintendents indicated that Visual and Performing arts were ranked among the top four most likely to be cut.

Seven superintendents declined to answer the question regarding cuts and six out of those seven responded that it is possible or very likely that they will have to make program cuts.

Forty-seven percent of the superintendents thought an impending tax lid (the imposition of a lid on taxes in Nebraska to provide property tax relief) would make it "very likely" that they would have to cut programs or staff. Thirty-three percent thought it would be a "possibility" they would have to make cuts. Thirty-one percent said that it was "not likely". For those who responded "not likely", three added the caveat which suggested "not for the 1998-99 school year, after that ?".

Electives and Fine Arts Requirements

Respondents indicated that a variety of electives are available to students in school districts across Nebraska. Table V is a bar graph which indicates the types of fine arts courses superintendents say their school districts offer, and how many districts offer each course.

Table V

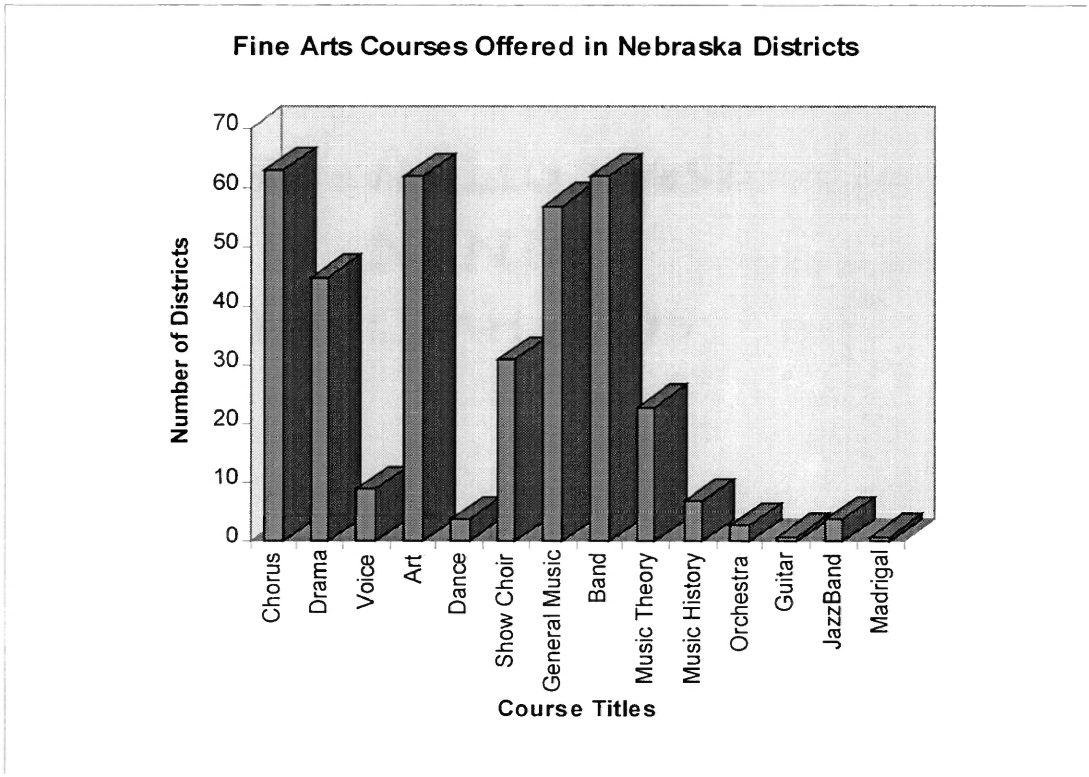


Table V indicates there are a variety of courses offered in the 64 school districts responding, including Chorus, Band, Art and General Music in most school districts and courses like Dance, Guitar, Madrigal and Voice in only a few school districts

Table V denotes that ninety-eight percent of the school districts offer foreign language, physical education, and computer courses. Ninety-four percent of the school districts have weight training as an elective. Industrial education and home economics are available in 89% and 93% of the districts respectively.

Visual and performing arts classes are offered in most school districts. Ninety-eight percent offer chorus; 97% offer band and art; 70% offer drama; 48% have show choir as a course; and 36% of school districts give students the opportunity to take music theory.

Fine Arts Graduation Requirements

When asked whether music is required study, 95% replied that it is a requirement in grades K-5. In grades 6-8, 86% have a music requirement. In high school, however, only 21% of Nebraska school districts require music.

Though music is not specifically required, 46% of districts responding have a fine arts graduation requirement. Fifty-four percent of the districts responding do not have such a requirement.

Options available to students for fulfilling fine arts requirements are many and varied. Some district parameters include only arts courses as fine arts. Others included a choice between the fine arts, foreign language, and business courses for fulfillment. Requirements ranged from one district with a one-semester fine arts requirement to another district with a four-semester fine arts requirement.

Nebraska is among 19 states which have no statewide graduation requirement in the arts. The other states with no statewide arts graduation requirement are Alaska, Colorado, Delaware, Hawaii, Iowa, Kansas, Louisiana,

Massachusetts, Michigan, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, South Carolina, Washington, Wisconsin, and Wyoming.

Among the 31 states that do have a state graduation requirement in the Arts, 14 states include the arts as a choice among required electives, four require arts credits for advanced diplomas or college-bound students, and 13 require credit in arts specifically. The school districts in Nebraska that implement their own fine arts graduation requirement generally follow the type of prerequisite guidelines found in the above nation-wide alternatives.

Written Comments About Personal Values With Regard to Music and its Inclusion

In response to the question "How important would you say the arts are in your own life," 23 superintendents said the arts were "very important", and 37 said they were "somewhat" important. Three replied they were unimportant. One superintendent declined to answer. In response to the same question in regard to their community, 10 superintendents said that the arts were "very important" in their community, and 46 said the arts were "somewhat important". Five of the superintendents thought the arts were "unimportant" in their communities. Three superintendents declined to answer this question.

Only half of the superintendents responding answered the final question "How would you define an educated person?". Because their responses were

thoughtful and their words were apparently chosen carefully, great care was given to analyzing their responses. There were three issues which emerged consistently. These verbatim responses described an educated person as (1) a person who can write, read and think:

> The person is able to read, write at 12th grade level; reads books, newspapers, magazines regularly, can articulate basis of scientific inquiry – knows what 'a theory' means; is a practicing citizen (tries to keep political fiction and political reality separate); can operate a PC in basic 4 application areas; practices at least a semi-healthy lifestyle; holds a job and supports self.

(2) a person with a well-rounded experience of study and with a wide variety of experiences:

> An educated person is one whose background experiences allow him to be well versed in a variety of topics. This person has the ability to be well employed, enjoy many avocational avenues and provide social help to his community.

and (3) a person who is able to function in society.

> Any person capable of performing in today's world. The greater the education, the greater the performance.

Some superintendents suggested the question missed the point:

> N/A [not applicable]. How do we get to $1.10 and $1.00? The issue

is not one of what is good for students as what an educated person is. What the issue is is TAXES and what people will pay for.

Member of the genus species. – Homo Sapiens – who is educated (learned). Educated in what? Kathleen, if you are asking me if I think the arts are important, the answer is yes. If you are asking me if they are in jeopardy, the answer is yes. The Omaha Chamber of Commerce basically doesn't give a damn about the arts in schools. They want less taxes because of their rapacious cupidity.

Some other responses follow:

An educated person(s) is one who is equipped to live well and even flourish in the range of situations in which they are likely to find themselves. Flourishing human beings will be able to integrate and modify the emotional, personal, cognitive demands of a rapidly changing society.

A person who has developed a broad appreciation for, and understanding of, the social, physical, spiritual, emotional, and mental dimensions of the human experience.

I believe an educated person continues to learn and grow throughout a lifetime. One can be very knowledgeable in one area but lack knowledge in another area. The more one learns the more one realizes how much more there is to learn.

Chapter V

Conclusion

The purpose of this study was to determine the attitudes of Nebraska superintendents regarding the relative importance of music in the curriculum, what would be most and least likely cut if forced to do so, and how each of the superintendents felt about the fine arts in their lives and in the lives of their community.

It is apparent that visual and performing arts in the state of Nebraska are in a precarious position. While superintendents and their communities generally find the arts important, they are among the most likely of subjects to be cut. The superintendents who judged the arts to be important in their communities may have based their belief on observations regarding how their community supports the arts in the schools, by how many students are enrolled in arts courses, and by how often cultural activities are sponsored and supported by the community outside of school. Specifically, four superintendents declined to answer the question regarding the importance of the arts in their personal lives, and three declined to answer the question regarding their communities. Perhaps these superintendents had not taken the time to ponder the importance of the arts prior to receiving the survey, and were not inclined to bother about it once the question was posed to them. Or, perhaps they were not convinced themselves of the importance of the arts and did not want that to be known. In regard to

their community, perhaps the three superintendents do not live in communities where the subject of the arts is of paramount interest.

Seven superintendents declined to answer the question regarding staff and program cuts, even though six out of these seven answered that it is possible or very likely they will have to eliminate some programs or staff. Perhaps these superintendents are not ready to "show their hand" regarding what specific cuts they are preparing to make. They may not be willing to inform a graduate student when they have not yet informed their own communities. It may also be that they are delaying any final decision until the time comes when they have no other choice.

The manner in which superintendents were asked to rank possible cuts may also have caused confusion because it was similar to the question regarding the importance of courses, while the rankings were antithetical to each other (#1 in the first question equals "most important" course, while #1 in the second question means "most likely" to cut.) The superintendents who created their own ranking system for only a few of the courses indicated, may have considered there were only a small number of courses they were prepared to eliminate. They may also have state or district mandates which direct them to offer a certain list of courses and perhaps the courses they declined to rank fell under the mandates.

Forty-six percent of the school districts have a Fine Arts requirement. Though the school districts implement requirements, the State of Nebraska does not have a Fine Arts Graduation Requirement. Nebraska is among 19 states who currently do not have a fine arts graduation requirement. Thirty-one states do have a state graduation requirement in the Arts, varying between the arts as a choice among required electives, arts credits for advanced diplomas or college-bound students, and credit in arts specifically.

School districts in Nebraska offer a wide range of electives and visual and performing arts courses. They appear to be committed to offering their students a wealth of opportunities for varied background experiences.

Only 50% of the superintendents responded to the question "How do you define an educated person". Perhaps because the question was placed at the end of the survey, and required a longer response, the superintendents declined to answer because of a lack of interest or time. It might also be possible that these superintendents have not previously taken the time to consider this question in relation to their own educational philosophy, and were not inclined to do so for the questionnaire. Of the superintendents who did choose to answer, it appears that they have a well-conceived philosophy of education which includes a wealth of experiences beyond four basic courses.

Recommendations

Fine arts advocacy groups may want to actively provide information which supports the value of studying visual and performing arts to their schools' administrations. The "value" may well have to include information including aesthetics, higher brain function studies, discipline and expression benefits for at risk youth, interdisciplinary support for "core" subjects, and so on.

The Nebraska Department of Education might want to consider revisiting its delineation of "must know" and "should know" courses in the curriculum in light of the superintendents' overwhelming rejection of the core model as the only subject students need to learn.

In light of the variance of ranking for literature and considering that 64% of superintendents ranked it between 8 and 10 in importance, teachers of literature may want to become advocates for their subject.

Taxpayers may want to consider what it is that school districts will do in response to lower budgets. Taxpayers would do well to research just how the money spent per pupil is distributed. Citizens may also benefit from composing their own definition of an "educated person" to then use as their basis for supporting or criticizing schools, rather than simply jumping on the "lower taxes" or "back to basics" bandwagons. They may also want to investigate the breadth of influence the Omaha Chamber of Commerce has upon statewide school funding issues.

Superintendents had many thoughtful responses defining an educated person, which indicates they have established their own philosophies of education, and believe a well-rounded education is essential. If they believe this, they will need to find creative ways to maintain a wide variety of programs in their districts. Neglecting to do this may indicate that they are resigned to failing to educate Nebraska's youth as they believe they ought to be educated.

Colleges and universities which have entrance requirements including literature, visual and performing arts or foreign languages may want to be proactive in their support of these programs in the high schools.

Teachers of Literature may need to begin their own advocacy efforts, given the superintendents' wide variance and generally low ranking of literature.

Implications

While Nebraska districts face other issues beside cutting courses to comply with the legislation, it is interesting to note their superintendents' preferences, opinions, predictions and philosophies.

Future studies may include determining how many districts actually choose to make cuts in programs and/or staff. If cuts are implemented, studies may be done regarding the effect of such changes on students' test scores.

Early findings since the first portion of the lid was enacted, indicate that the $1.10 lid forced 195 of the districts, whose leader's responded to the Nebraska Department of Education's survey, to administer $23 million in general

fund budget cuts and eliminate more than 650 teaching positions. The districts said they had "made cuts in nearly all subject areas with most cuts concentrated in art, music and other electives" (O'Connor, 1999, March 16). In addition to that, district leaders reported they had "closed or will close over the next two years, 20 attendance centers, mostly elementary schools in small towns and rural areas, saving about $2.5 million" (O'Connor, 1999, March 16). A future study will need to be implemented to discern what schools are forced to do when the $1.00 lid takes affect in 2001.

A study might also be done to determine how many students transferred to private schools, or to other public schools which offer the courses students desire.

Additional studies may include 1) determining whether, or if, students are different when they have not studied the arts; 2) ascertaining whether test cores in other subjects decline when the arts are removed from the curriculum; and 3) discovering what should/do superintendents know about recent research about music.

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Appendix A

Independent Study Project Questionnaire
Graduate Studies, Departments of Education and Music
University of Nebraska at Omaha

Considering what is essential for students to have as a body of knowledge upon graduation from high school, rate the following courses from 1 (most important) to 10 (least important).

1. ____ Vocational Ed.
2. ____ Science
3. ____ Foreign Language
4. ____ Math
5. ____ Health & Well-ness
6. ____ Social Studies
7. ____ Literature
8. ____ Visual & Performing Arts
9. ____ Information/Applied Technologies
10. ____ Reading/Writing

(11.) Do you consider the Nebraska "Core" of Math, Reading & Writing, Science, and Social Studies the only subjects a student **must** study to be considered educated?

a. ____ Yes b. ____ No c. ____Unsure

If, because of budget constraints, you need to cut a program, rank these courses in order of most likely (1) to least likely (10) to be cut:

12. ____ Vocational Ed.
13. ____ Science
14. ____ Foreign Language
15. ____ Math
16. ____ Health & Well-ness
17. ____ Social Studies
18. ____ Literature
19. ____ Visual & Performing Arts
20. ____ Information/Applied Technologies
21. ____ Reading/Writing

(22). With the impending tax lid, how likely is it that your district will have to cut programs or staff?

a. ____ Very Likely b. ____ Possibility c. ____ Not likely

Check all of the Fine Arts classes your district offers:

23. ____ Chorus
24. ____ Drama
25. ____ Voice
26. ____ Art
27. ____ Dance
28. ____ Show Choir
29. ____ General Music
30. ____ Other, please list:
31. ____ Band
32. ____ Music Theory
33. ____ Music History

_____

Check the types of other electives your district offers:

34. ____ Foreign Language
35. ____ Shop/Construction
36. ____ Forensics/Debate
37. ____ P.E.
38. ____ Computers
39. ____ Others, please list:
40. ____ Weight Training
41. ____ Home Economics

_____

Is music required study in the following grade levels?

K-5	42.	a.	____ Yes	b.	____ No
6-8	43.	a.	____ Yes	b.	____ No
9-12	44.	a.	____ Yes	b.	____ No

(45.) Does your district have a Fine Arts requirement for graduation from High School?

a. ____ Yes b. ____ No

If Yes, please elaborate:_____

_____

(46.) How important would you say the Arts are in your own life? (Consider: how often do you listen to music, go to the theatre, attend the symphony, go to art museums, view arts on TV, pay attention to the politics of the arts?)

a. ____ Very Important b. ____ Somewhat important c.____ Unimportant

(47.) In your opinion, how important are the Arts in your community?

a. ____ Very Important b. ____ Somewhat important c.____ Unimportant

(48.) How would you define an Educated Person ?

_____

_____

_____

_____

_____

_____

University of Nebraska at Omaha
College of Education

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Dear Superintendent:

The enclosed survey instrument is a part of a UNO independent study project I am working on under the direction of Dr. Martha Bruckner, Chair, Department of Educational Administration.

This project has included studying theories and practices related to music education. As an adjunct item, I am sending this questionnaire to a random selection of superintendents in Class III, IV & V school districts in Nebraska to ascertain the status of music education in those districts.

I am particularly desirous of obtaining your responses because of the individual nature of each school district in Nebraska, and because of the differing effects of the budget lid on each district. The enclosed instrument has been tested and has taken each respondent seven to ten minutes to complete.

I would appreciate your returning the completed questionnaire in the enclosed business reply envelope by Friday, February 13th, 1998.

If you have any questions, feel free to contact me at 402-554-4894, or Dr. Bruckner at 402-554-3445.

Thank you for your time and consideration regarding my study.

Most sincerely,

Kathleen E Knudsen

Kathleen E. Knudsen

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