

Why Study Music?

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We can achieve well and have fun simultaneously.—Katie Davidson, age 17

I. "Why Study Music?" Is a Disturbing Question

We have all confronted skeptics who claim that musical skill can be learned without planned, sequential instruction. Furthermore, most people, early in their lives, develop strong preferences for a few types of music. We don't need to be "taught what to like." And if people follow those strong preferences with action, they gather detailed knowledge about the music that they invite into their lives, most of it without conventional instruction. In the face of these beliefs and others, what rationales support planned programs of music study and how do these programs benefit our society and our people? What ethical basis is there for interfering with these natural human processes?

Our profession rests on the assumption that music study is not only valuable but necessary. "Why study music?" is a question that invites professional risk. So, why bring it up?

One reason is that there are so many positive, enthusiastic, and convincing answers. Music study is defended in curriculum documents, in appeals for more time or money for school music, in parent conferences when a good student plans to drop out of music study, in recruiting presentations, in advocacy brochures, and more. These defensive arguments have a special urgency about them that arises from the general belief that music education programs are at risk and that we need constant assurances that music study makes sense. Perhaps that is why there are so many answers. The skeptic asks, "Why do you work so hard at justifying the worth of your discipline? If it has always been so hard to justify music study in American schools, why don't you just give up?"

Another reason to bring up the question is that there are so many exceptions. We must respond to evidence that music study is unnecessary: We hear that Irving Berlin could not

write down the music he composed. We hear that most popular music stars, even a few famous opera singers, "can't read a note." The skeptic asks, "If these accomplished musicians didn't need to learn through music study, why should I bother to study music, or why should I support such a program for others?"

We are forced to bring up this question because there is so much music around us. Recorded music is readily available for purchase, and good playback equipment is relatively cheap. Whole channels of television and, increasingly, cable radio products and Internet sites are devoted to music presentation. Broadcast media companies use music to draw targeted audiences to advertisers through the music policy decisions that they make. "Music study seems redundant," says the skeptic. "In this mediascape, I can find all I need, so why push me into music I don't need? And, why should I learn to perform it when there is little reason for me to make my own music anymore?"

We should address this issue because it is common for people to say to musicians something like, "I can't sing a note, but I love music anyway." There are many explanations for this negative and unnecessary claim, but it ultimately relieves the speaker of musical responsibility. Many of these people cite negative events during music study as the cause of that effect.

Finally, people at a young age tend to have very stabilized tastes for music they like and eventually support financially, through media purchases or direct support individual freedom supports personal choice in matters like music. The reasoning goes: "To know what I like, and I like what I know, so what gives you the right to challenge that? What gives schools the right to select music for me or my child? Why should other people create a list of music officially supported by public policy through government agencies such as schools?"

Can We Answer the Skeptics?

The skeptic's questions are not easy to answer well. The simplest response to all of them is that virtually everyone is drawn to music of some kind. Music is complex enough to reward lifelong study, and people tend to return to behavior that is reinforced. Music that rewards attention over one's lifetime requires study, and study improves the range and subtlety of meanings we can derive from musical experiences. The skeptic comes back: "But there is much in life that is interesting, complex, and rewarding; we don't study many of these things as deliberately as you think people should study music." Converting a virtue like meaningful music into a necessity in public policy is as difficult to explain intellectually and politically as it is agreeable socially and personally. Music study is easy to defend but hard to rationalize.

Another simple response is that universal, conscious study of music springs from traditional European-American values, and the function of public education is to indoctrinate the young with those values. Proponents of this view often say, "We should not question such important traditions. They have served us well, and they continue to produce a healthy variety and an unending flow of new music to hear, to perform, and to

enhance the events and rituals in which we participate." Does this leave too little room for the empowerment of the individual? Do we socialize music study too much, and is this problematic in a society that values and even depends upon individual creativity?

Now that the arts are part of the education core, not only in *Goals 2000* but also in most states' education policies, we have some quick work to do. Music education and education in the other arts are in competition for funds and policymakers' attention during the rapid development of high-stakes, standards-based graduation examinations in so-called basic subjects. School administrators attend workshops on how to motivate teachers to raise standards, usually understood to mean that test scores in reading or mathematics, etc., should go up. They are hearing the policy assertion, "If it isn't among the graduation tests, it doesn't belong in the school." Alas, many are listening. Within the current generation of school leaders' lifetimes, business and industry visionaries have created a management outlook that favors plans to "focus the organization," downsize, outsource optional services, and go to the bottom line for validation. This is not lost on school managers. People from business and industry are on school boards. For many of the school managers who are accountable to these people, the bottom line is test scores.

We must meet the skeptic's challenges and glib, obvious responses to them with new, better understandings of the effects and benefits of music study—psychological, educational, cultural, social, and (even) economic. We must also look ahead, to see if we can frame our deliberation of this challenging question in such a way that new questions can enter the professional debate and new understandings can contribute to the answers as they emerge.

The purpose of this document is to meet these social and cultural conditions with some extended, research-informed thinking about music study. We will confront some of the thorniest issues related to the topic and develop reasoned answers to some of the most difficult questions asked of us. Although oriented to the learner, this paper will also envision stronger rationales for planned, sequential music study and better music teaching practice for the coming generation. At the beginning of each section below, there are some questions that guided the writing. At the end of the paper, I've summarized the complex ideas that form the six-part answer to the question "Why study music?"

II. Music Study: The Issues

When One "Studies Music," What Does One Do?

We learn all the time merely by living our lives. This is *incidental learning*, and it occurs in most of life's situations; our environments, including the people around us, shape the ways we approach other, less familiar, environments. Humans *study*, on the other hand, with the assumption that they are capable of shaping themselves in some predictable way—intentionally and mindfully to broaden the experience upon which they live in the future or to deepen it, usually both. Study is deliberate, planned learning. The distinction is in the planning, predicting, and goal setting, not in the results. We learn a great deal of unplanned content through incidental learning. Planning not only allows us

to guide our learning, but also gives us the potential to accelerate our learning processes, to learn more quickly and efficiently.

In this paper, *study* refers to what individuals do to learn deliberately, in self-guided musical growth as well as in "formal" and "informal" settings for study, in and out of schools. The orientation of this paper is the person because, regardless of the setting, it is the person who learns; this paper attempts to describe the process "from the inside out." Learning is always personal; one does not learn for someone else. This is true in study as well as in incidental learning. But a person can learn something in order to guide the learning of others—a common occurrence, in music teaching as well as in music making.¹ Regardless of what one does with what one has learned, learning is an individual process and, as we shall see below, study is the way we deliberately change ourselves. Learning is the necessary condition and foundational assumption of study.

When someone studies music, she or he intentionally engages music and music-related materials and ideas to reconstruct and improve some of the skills, knowledge, evaluative insights, and cognitive capacities used in musical experiences. The learner then arrives at new encounters with music as a changed person, more capable than before. Study, then, consists of actions designed to produce personal learning. Incidental learning lacks the focused intentionality of study. Because this paper's principal audience consists of music teachers in educational institutions, much will be said about schooling. However, a proper understanding of musical study ignores barriers between the sources of learning; the reader should not assume that the setting for music study is confined to or focused primarily on schools.

Four interactive and overlapping types of change occur in music study.

Cognitive capacity: Study depends upon a person's capacity to construct and recall information, but cognitive capacity is not confined to this. With music, the source of the information disappears after the sound dies away, but we are equipped to deal with this well. Perception is the neurophysiological process that both enables and is shaped by cognition. But, perception is not a passive process. We construct what we perceive, and our prior experience shapes what we notice about a situation. cognitive capacity expands when we do this. With mindful, alert repetition, we notice more; our experience becomes richer. As an ever-expanding result of music study, then, there should be noticeable increases in the amount of information one can construct during a musical experience. Alas, we cannot yet measure this capacity directly. Intuition is perhaps the most closely related indicator of human cognitive capacity, and music study increases the range and improves the validity of one's musical intuitions.

Repeated experience and intuition can also be limiting if we become comfortable with their current state, for such comfort is the foundation of bias. Since perception is an active process and shapes what we notice, it takes some effort to keep expanding one's perceptual field with new musical experience so that mere habit or, worse, boredom does not result from repeated experience with music. Not only does study depend on expanded

perceptual capacity, but the effort to expand it pays off in richer information, better intuition, and greater cognitive capacities.

Evaluative insight: Everybody has experiences that repel, attract, or leave them unmoved. Expanding our cognitive capacities, chiefly through repetition with the same or similar experiences, leaves us with the sense that some of these experiences are better than others, even though they might be similar in general. Five performances of the same music vary enough that our inclination is to rank them, or at least rate their effectiveness. Rarely are they equivalent.

Through music study, there should be noticeable increases in the personal development and use of criteria related to musical and human value. These can be noted and shared through one's estimates of goodness or fit between musical events and human capacities, needs and wants. The person, through music study, should explore the potential and actual results of musical actions at deeper and deeper levels of subtlety and import.

Knowledge: This much-maligned term always needs to be defined in analytical contexts. I will use the term to mean analytical abilities and the precision of the terms that support them. In this context, knowledge includes things such as musical terminology, analytical strategies and principles, even "rules" for tone production. Knowledge has been gained when there are observable increases in the precision, communicability, and usefulness (really, *validity*) of terms, strategies, and principles; and an improved speed and accuracy in recalling such things. One can increasingly use memory as a reliable source of schemes useful in analysis.

Sharing musical experiences when the causes for them (the musical situations) have disappeared requires language and many other symbol systems, even conductors' gestures. As our musical experiences grow in variety and complexity, and as we communicate with each other about them, the validity of the terms, strategies, and principles about music becomes tested against that of others.

Skills: I will use a narrow definition of the term *skills*. In this analysis the term skill is not analogous to more inclusive or general uses of the term, such as expertise, or (as used in schools) *library skills*, or *writing skills*. Expertise involves more than psychomotor or manipulative abilities.

Here are some analogous terms used in educational and psychological writing and discussions: techniques, psychomotor learning, manipulative abilities, executive functions, or execution. These terms mean about the same thing as skill, and it would not be necessary here to analyze the variations. Skill is an important result of music study.

Expanding or increasing one's musical skills results in changes in human characteristics useful for musical purposes. These include characteristics such as strength, accuracy, predictability, endurance, flexibility, control, and speed in one's use of a

musical instrument, including the human voice, as well as computers and any other means of producing sounds used in music.

At its best, music study occurs during and through authentic participation in music. In this way, then, music study differs little from practical music making and listening. Skilled music teachers, however, design musical settings that create a patterned, efficient, sequenced, and thorough development of musical abilities in learners. To the student, learning music and doing music differ little. The pedagogical process that is promoted here is similar in general to good teaching in mathematics, social studies, or language arts instruction; i.e., the instructional and learning strategies have an authentic quality. However, musical experience is not equivalent to these others. It is unique and important. Bennett Reimer's paper develops the idea that musical knowing is not only different from mathematical knowing and the rest, but also equals their importance to living a human life well.

Does Music Study Add Up to Anything?

The best reason to study music is that it gives people a reliable, thorough, and efficient way of becoming expert at creating, communicating, and deriving meaning musically in the world of humans. Musical expertise "matures"—becomes embodied—when a person naturally and effectively mobilizes his or her best musical resources in musical situations without prodding from someone else. It is important to understand that this need not be institutionally related to age.

As noted above, however, it is too common for people in the United States to abandon active music making or excuse away their nonparticipation. A major cause for this is that many musicians have made a wall out of expertise, and some have set themselves up as gatekeepers. We must now lead people to define expertise dynamically and personally, not as some sort of barrier to a musical life. The gap between school music and what I call "life music" can be narrowed by redefining expertise as an action one initiates mindfully that synergizes one's skills, knowledge, evaluative insight, and cognitive capacities in practical, authentic musical situations.

There is no need to certify expertise any more than we do now, but there is a need to help people to diagnose their musical expertise and motivate them to expand it. National and state standards help music teachers to identify and diagnose some aspects of musical expertise, but standards should not be used to "evaluate musicianship." Musicianship is much broader, more fluid, more varied in its expression among people than any list of competencies suggests. This does not negate the value of standards. Music teachers can learn how to use standards diagnostically, and use these diagnoses with other data to support their critical leadership function in the musical and educational health of our society.²

The distinction between an *expert* and a *novice*, in music or in anything else, cannot be based on the identification of a threshold that separates people. The terms novice and expert merely represent ends of a continuum that can be abstracted from life when we

bring our learning to bear on a problem. We find ourselves somewhere along the novice/expert continuum in just about everything we do. *Musical expertise*, then, is the term I will use to refer to a characteristic of all persons that represents the aim of music study—the embodiment of musical skills, knowledge, evaluative insight, and cognitive capacities, coupled with the capacity to self-diagnose them, to expand them effectively and efficiently, and to use them synergistically in musical situations of all kinds.

Most people have musical profiles that describe their levels of expertise in the several "components" identified by whatever assessment of expertise is being used. Such assessments, by definition, limit the diagnosis of expertise to the components designed into the assessment tools. All such tools are like stencils, letting information flow only through whatever "windows" were put there.

Moreover, people expect reports of the results of the assessment. In K-12 music performance assessment, it is common to locate six levels on the novice/expert continuum, generally defined by the artistic difficulty of a large body of musical literature. Music performance competitions and other third-person evaluations produce ratings or rankings. When required to do so, music teachers give grades.

There are other grounds for a diagnosis of musical expertise than musical difficulty. Based on a series of studies in England and other countries, Keith Swanwick and his associates described an eight-level diagnostic scheme for assessing expertise in music composition, performance, and listening, the synergy of which Swanwick calls musical knowledge or musical understanding.³ David Elliott suggested a five component orientation to analyzing musicianship and assessing musical growth.

There is still another view. Thomas Regelski sees musical expertise as a life process undefined by stages or types, but defined instead by the person living and participating musically in his or her world.⁴ *Expertise* is a term not applicable in this formulation, except as each person becomes interested in defining it; and one does not "study music" in the sense normally used to refer to the deliberate development of one's skills, knowledge, evaluative insight, and cognitive capacities in relative isolation from each other. Rather, notes Regelski, "In music, then, this comprehensive, functional, and basically tacit 'know how' is what is called artistry, functional musicianship, musicality, virtuosity, or creativity—usually all are implied" (p. 47).

Such *know how* develops naturally through action. Levels of know how can be described at any given point. However, descriptions vary with the person, the assessment instrument, the level of know how, and the musical task of the moment.

An important distinction arises here between assessing musical expertise diagnostically and evaluating it against some standard described in advance, regardless whether such standards were defined by others or by oneself. Doing curriculum or making predictions about levels of expertise depends upon some generalized view of how humans study and learn music. Programmatic (or even curricular) efficiency comes from grouping people with similar know how together, predicting how the diagnosis might go

at various stages or making some other accommodation to diversity among developmental profiles. The term *efficiency* again rises to the surface.⁵ Programmatic efficiency, however, is a weak personal motivator at best.

Unfortunately, the discussion of various musicianship patterns of growth above slights the personal nature of music study. People test their expertise in ways unique to their musical interests. Personal motivation and study are intertwined, of course. When a person confronts a musical situation that is interesting enough to motivate attention and, at the same time, is challenging or disturbing, baffling, too difficult to manage easily, etc., one studies. The person is not likely to be motivated to study if he or she does not value a better outcome enough to do what it takes to meet the difficulty with better personal tools—to determine a way to make things better and to learn how to do it.

People challenged in this way attempt to analyze the difficulty in order to focus the learning, to make the learning efficient as well as effective. The most lasting and liberating motivations come from within the musical situation. As a result of the analysis of the musical difficulty, one forms plans, gathers materials, and takes action, usually to change one's current profile of skills, knowledge, standards of quality (evaluative insight) and what one notices (cognitive capacities). One studies. Then, people enter (create) the musical situation again mindfully, aware of an improved capacity to have the musical benefits at a higher level. The person diagnoses and assesses learning, a marker of expertise.

In incidental learning, all of this happens intuitively and often instantaneously, without much deliberation. We can thank our pedagogues, philosophers, and psychologists for the current state of our ability to slow the process down enough to find out how it can be improved. To the learner, however, in music study or not, musical curiosity is a natural motivator: "What would happen if I . . . ?" Curiosity, as well as our growth as people, motivates music study. What we valued and sought to experience as children no longer satisfies when we are older because we have changed as people. Music rewards study because there is always music to meet the needs of persons of any age or stage in life. Music teachers should intervene in this process only if they can make it better.

What Happens to the Learner during and after Music Study?

By now, nearly everyone interested in children has heard of the "Mozart Effect" and the findings from research that support it.⁶ Symposia,⁷ books, recordings, workshops, governors' gifts to new mothers, and convention sessions are devoted to its promise. It is good that musical behavior and its human effects are being seriously studied by psychologists and neurologists, and, as Clifford K. Madsen told the American Music Therapy Association in 1998, "We hope that further investigation confirms these preliminary investigations."⁸ All music teachers share that hope. Bennett Reimer (most recently, 1999) and his philosophical predecessors such as Charles Leonhard, Harry Broudy, and James Mursell argue for a music-based rationale for music study, rather than

a justification based on extramusical benefits. This, also, is a value that music teachers share. These are not competing values if we are clear what we mean by the term music.

Because music is fascinatingly complex, its study is rewarded, but research into music learning mechanisms moves slowly. This is becoming apparent not only in music but in other disciplines. Although researchers have increasingly better equipment and better research designs, work in music research is still in its early stages, and it will take time for definitive answers to musically human questions to emerge. Teachers and policymakers must stay in touch with such research and put what is learned into the musical and educational perspectives arising from their professional situations.

The distinction between incidental learning and deliberate musical study is important in such research. Above, I asserted that music study involves planned increases in musical skill, knowledge, evaluative insight, and cognitive capacities. Incidental learning—learning by participating in the musical traditions in one's life-space—may result in these increases, but such things are seldom planned. For research, assessment tools must be sensitive to one or the other. Studies of music achievement most often test the efficacy of teaching-learning procedures. Incidental learning can complicate the conclusions if it is not "controlled for" in some way. Conversely, studies of incidental learning are seldom "uncontaminated by" deliberate attempts of subjects to grow musically.

However, for general assessment purposes in music education, it is increasingly important that assessment instruments be sensitive to both. That is, music teachers must base instructional plans on what people actually know and can do in music, not on what the teacher thinks she or he taught them. Once a clear diagnosis of the student's musical characteristics is made, the teacher can determine how to guide further musical studies.

This paper is about music study, but we must continually emphasize that planned music study and incidental music learning accumulate and support each other in the development of musical expertise. Some hypotheses about music study are supportable:

- The ability to organize acoustic events into patterns (construct schemata, derive meaning from sound) grows with music study.
- Learning time compresses with skilled management of the learning process as well as with age and experience. That is, learning how to learn improves naturally, but teachers can accelerate the process even more.
- Music study, used as a contingency, ". . . is an effective reinforcer for academic behaviors like math [*sic*] or verbal learning, as well as social behaviors like attentiveness."⁹

Newer theories of human functioning integrate factors that once were separated. For example, mind and brain are no longer seen as separate entities, studied by putting one or the other in the foreground. Subject and object (subjective "vs." objective) are no longer

viable divisions of reality. Even the right brain-left brain metaphors have lost their power to organize our thinking about how we use our capacities. Mental processes (mind) are no longer separated from physical processes (body) since their synergy is a much more powerful way of thinking about human beings. The nature-nurture question is no longer asked seriously; we now know "it's both." In general, the "or" and the "versus" are disappearing from the way we explore human ecology. Things are not either this or that; they are "both," in some form of integration. Moreover, theories of music are emerging that view music as a unique and liberating form of embodiment.¹⁰

When researchers looked at musical behavior in these integrative, "both-and" ways, they found some interesting things.

- More of the brain is engaged during musical experiences than during rest or linguistic communication.¹¹ Musical participation, including listening, seems to arouse other brain functions, such as spatial reasoning, attention, and perception. Music can, as a result, carry other information, such as the letters of the alphabet, the steps to a dance, the procedures in an industrial assembly line, the brand names of manufactured products in jingles, and the place names in popular songs.
- There are more developmental patterns in music besides the changing voice and certain kinds of music aptitude.¹² Composition and improvisation, listening abilities, and the ways musical performance is integrated with the rest of one's life also exhibit developmental patterns.¹³

Music study, then, changes people.¹⁴ It expands the brain's electro-chemical activity in the presence of music and since the brain is an active part of perception, and because perception and cognition are integrated processes, what one notices in music expands. Our understanding of the extent to which this affects other human functions is increasing, and there are few simple answers.¹⁵

The following are some ways that music study can support various abilities useful to the student in reaching several important educational goals:¹⁶ analyzing documents, analyzing performances and other actions, brainstorming, classifying, comparing and contrasting, creating a product, decision-making, defining context, developing and applying craftsmanship, developing personal commitment, discovering/generating patterns, evaluating, sequencing, synthesizing, valuing uniqueness and diversity.

As a result of our growing knowledge, we have a more thorough appreciation of the complexity of our capacity to make sense out of our world. This is liberating because unwarranted beliefs lead more often to division between people than to understanding, tolerance, and collaboration. Music study and learning provide independent, personal, expanded ways to experience life. This is empowering because, with study, we are each able to construct an acoustical environment that includes an ever-expanding store of personally meaningful music, rather than an environment limited by the musical taste of other people.

III. Personal Empowerment— Social Complications

There are ethical problems with the personal-power argument for music study, however. If we turn for guidance to tolerance and understanding, rather than to competition and dominance, we soon realize that in the personal-power argument we are setting up a scenario in which we are "reacting" against others who are, themselves, merely exercising their rights to create personal musical environments. Musical space is as important for others as it is for ourselves. We devalue other people's interest in expanding their cognitive capacities, evaluative insights, knowledge, and skill in music at the risk of losing their tolerance for ours. We must learn to value musical commitment in ourselves and in others. A music study program that motivates musical expansion and personal choice accompanied by tolerance and creativity produces diversity of the richest kind.

What Personal and Social Benefits are Unique to Music Study?

Personal motivations for music study do not explain what we know about musical life, however. If personal music cognition were all there were to the phenomenon, few traditions would emerge and we could not explain the power of music to become treasured and to unify whole societies. Music study, then, includes not only our own meaning making but also a study of the meanings that others find and create in their music. Patterns emerge and habits form from this, usually through incidental learning. As Howard Gardner points out about learning to read:

By the age of third grade almost every kid in America can read....The question is Why don't kids read? The answer is because their parents don't read, and that includes many teachers. . . . So, kids are going to like music and be involved in it if their families and the people around them are involved in music.¹⁷

If music is learned through living, then, what about schooling? Is institutionalized music study—school music—merely a neo-liberal attempt to wrest control of students' musical lives away from their families and friends, and shape their preferences for them "for their own good"? After all, guiding the music learning of others requires that the guide, not the learner, make decisions about musical experiences, and these decisions are based on the defensible and well-considered belief that the musical experience selected for the learner was appropriate.

Is there a personal corollary to this; If we insist on our personal prerogatives, isn't that enough? Why study music that lies outside of the music found meaningful by our family, our friends, and ourselves? The short answer is not a liberal one, but a libertarian one: We should reserve the right to exercise musical options, even when these options seem to compete with the collective taste. And, we cannot exercise options that we do not know are there. We should also reserve the option not to exercise our independence but to connect musically with a social group. This, too, is a natural process, but some seek belonging through music systematically. Poignantly, many teenagers go to extremes to learn the dances and purchase the recordings and videos that some desired group of their peers finds fashionable, whether or not they are personally meaningful as music to the teenager. People make sacrifices of money, time, and personal freedom for the purpose of

belonging, and music is part of this picture. This is familiar to anyone who joins a religious or spiritual group, school, club, or organization that uses music in its rituals. Expanded to whole societies, belonging through music is the reason we teach children in America our repertoire of songs. We should continue this process, but that is not all.

E Pluribus Unum

Partially to promote community, we plan music study for others not only so that their musical experience is similar—so that they have the option of belonging through music—but also so that their musical options increase beyond those easily available in their personal surroundings. Music study contributes to what some call the *ecology of schooling*, or the complex "landscape" that the school presents to learners. Unity and diversity are both important parts of this landscape in compulsory schooling, and music makes both unity and diversity audible in ways that language does not. Planned well, music study can uniquely give reinforcement to the many person-group relationships that the school is designed to build. If competition is held up as the primary motivator for music study, unity and diversity are lost. Competition reinforces conformity. Conformity is not the same as unity, and diversity is seldom valued in musical competition. Unity, on the other hand, is an important quality, felt rather than directed, and music can be part of it. There is not a good English word for the German word *gemütlich*, the good quality of community that people experience during events that promote unity rather than conformity.

In the ecology of schooling there is much use made of competition. The same students who study music compete in other arenas of their school lives, and, to be sure, there are competitions in music. On the whole, for most students, however, the competition values of these other school experiences are set aside in good music study. The emphasis is on creativity and sharing knowledge, insight, and skill. Out of the diverse contributions of musical students in a good music program comes an especially vibrant unity that reinforces their certainty of belonging, and this certainty increases their tolerance for diversity.

Music study, then, models an *ecological* approach to schooling through its infinite variety of worthy traditions and its real-time integration of process with product, a feature common to all music. Physical knowing (skill) in music contributes to and is supported by other forms of knowing in good musical practice. Through music study, however, we learn to separate the forms of knowing from each other, to improve on them, and then to re-integrate the result in a musical whole again. In this way, music study is a metaphor for the ways of knowing found scattered and largely separate throughout the student's day.

Not only in the social sense, then, but also in the curricular sense, diversity of ways of knowing and varieties of creative contributions become unity in music study. *E pluribus unum*.

Why Should All People in the United States Study Music?

No society lasts for long that fails to maintain a complex and diverse culture and neglects to use it in the general education of its young. The value that we call "free speech" lies at the core of America's strength, and we interpret this now to include all forms of symbolic expression, artistic behavior, and communication. Though this value protects disturbing expression, sometimes, it also permits an open flow of insights. People who sense that change is needed communicate something about their views. Music and the other arts participate in this "landscape of insight." People who are in touch with this landscape, but whose feelings aren't so well formed, can sense when someone else is expressing similar needs. There is communion. Sensitive people can connect, participate, reject, revise, communicate, and advance the insight for themselves and others. They can avoid the feeling of being alone with their inchoate perceptions.

This cultural process and the exercise of free expression are critical to the health of our society. The larger, industrialized twentieth-century societies that attempted to control and limit their people's cultural resources by the censorship, repression, and politicization of music, the other arts, and religion have collapsed.

However much people often express regret that "things aren't as they used to be" in today's musical participation, we must recognize that culture—music— remains stagnant at the risk of losing its meaning and importance as a social and cultural resource. In fact, school music programs should emphasize musical change and personal creativity. Doing so will go further to strengthen our society and preserve the importance of music in schools than the mindless preservation of bygone skills and repertoires.

Preservation need not be mindless. Our heritage contains monuments of human thought that some call the canon of western civilization, a cultural store that is deemed valuable enough that it ought to be preserved by teaching. Through music study, students gain access to the musical minds of geniuses such as Bach, Mozart, and Beethoven. If music teachers emphasize musical processes that challenge all students to share their musical thoughts—including their musical recreations of the masterworks—through their skills, knowledge and evaluative insights, then music study, even study of the masters, can have a new, stronger focus.

There is an important view that schools should transmit the complex mix of values that define the cultures within our borders, including those values reflected in their musics. At the same time, we expect schools to deliberately model and teach social conventions such as waiting in line, staying to the right, neatness, punctuality, "walk, don't run," polite speech, personal space, empathy for someone hurt, patriotism, individual contributions to group outcomes, and many more. If part of the school's function is to promote a civil society, then these are laudable habits for children to form, whether or not they know why they are forming them. Perhaps music programs reflect a mindless approach to learning social conventions when they emphasize technique over critical insight in learning to perform the musical canon. For example, reinforcing correct, accurate performance and ensemble conformity and discipline at the expense of musical insight, or emphasizing slick public performance as the principal focus of music

study for all children may reflect the broader "school values" listed earlier in this paragraph. Alas, in doing so, such programs model for children a disdain for valued musical actions that go beyond correct, prepared performance. Lost are the social and personal values growing out of improvisation, composition and revision, experimentation with musical ideas, and pushing the envelope of one's cognitive and perceptual capacities through music. People who promote correctness and uniformity are disturbed that students can challenge social conventions through the arts. To people disturbed by the authentic music produced by students—much of it exploratory—individual expression is not what these school values and social conventions support. There are good, practical reasons and functions for social conventions; teaching social conventions mindlessly miseducates children on such points.

Musical actions are metaphors of this problem, and music study helps children and young people negotiate the issues that arise from it. Through a good music program, one that emphasizes both individual and group accomplishment, both personal insight and recreative skill, all students can grow in that special value that supports our group preservation of individual "free speech" or, in its more contemporary formulation, "freedom of expression." Music study requires and reinforces individual action that alternatively creates and recreates, expresses and replicates. People who study music for extended periods learn how and when to be themselves and when to be a good group member.

This encourages children to form the dual habit of individual expression and group accomplishment. These interact. Neither trumps the other in our culture. All should study music because there are few other places in their early life experiences where personal sensitivity and contributions to the group are in such consistent, close, and powerful synergy.

At its best, then, music study is both an individual and a communal process. There are many valued musicians (people call them "self-taught") whose study is largely one of individual exploration not only to increase their skills, but also to increase their knowledge of other musicians whose music making they admire. Individual taste guides their study, and some of these musicians contribute significantly to the musical monuments of our culture. Indeed, all active musicians, regardless of the external sources of their expertise, contribute to the society's "landscape of insight" to which I referred earlier.

Far from denigrating the contributions of self-taught musicians, our society values these models and marvels at them. It is instructive that they are held up against the kind of "musical training" that stereotypes many school programs. The fact that self-taught musicians are contrasted with institution taught musicians should be a warning that music education institutions are losing credibility to the degree that individual musical impulses of children are subjugated to some mistaken notion of group values. We must know more than we do about the music learning strategies of self-taught musicians and bring such strategies into our pedagogy rather than reject them. After all, once we leave "formal"

instructional settings, we become self-taught. Musical expertise is oriented to self-guided musical study and music making.

For these and other reasons explored here, all persons should study music in a program that challenges both individual musical initiative and communal (group) achievement. In this way, the cultural value that marks our special brand of individual/group integration is modeled for children and practiced by them, and is therefore preserved in the schools.

Should Every Person Travel a Similar Music-Study Path?

Music is ubiquitous, and it is part of being human. Being identified with our culture through music study requires that we start any episode of study wherever we "are" musically. Teachers who intervene in this process can take the student from there to levels of musical expertise that provide lifelong avenues for individual growth. Music teachers can provide efficient learning of the essentials of the music currently being created and used, and thereby help individuals to compress the time it takes to act effectively on their musical impulses. Building multiple paths to reaching a mature, self-generated expansion of musical expertise is critical if all are to contribute, and the corollary values of respect, tolerance, and empathy for others' insights are built by sensitive teachers along the way. The diagram on page 74 shows graphically how this can be modeled.

If music study is to be efficient and effective both for the person and for the group, then there is a path. There are music-study patterns that the profession has found effective. The "content" of music study can be outlined as it is below,¹⁸ and there are sequences for study within the various parts of the outline that the profession has found efficacious.

Elements of music learning that are common to all paths:

Tonal development

- deliberately produce and discriminate pitch changes
- derive meaning from pitch/loudness/timbre
- create and decode notation for pitch/loudness/timbre

Rhythmic development

- maintain and respond to steady beat
- derive meaning from rhythm
- create and decode notation for rhythm

Interpretive/expressive development

- compose and improvise meaningful music
- derive meaning from gestures of conductors, performers
- gain insight from multiple musics
- evaluate musical validity of compositions and performances by self and others

- move musically (dance)

Process

- experience music
- practice for mastery and enjoyment
- orient skill increases to tonal, rhythmic, and expressive expertise
- analyze, evaluate, and produce music
- study music's many social, cultural, ethnic contexts
- find and use multiple sources and settings for musical learning
- recognize and use varied instructional sources

The music teacher will be able to guide and accelerate learning for the twenty-first century by emphasizing the following characteristics of teachers: motivator, facilitator, diagnostician, critic, evaluator, organizer, questioner, researcher, scholar, and (most important) active musician. The teacher's contribution to music study is to accelerate and guide learning. The teacher's musical expertise gives guidance to students, and the teacher's pedagogical expertise accelerates their learning.

IV. Public Musical Health

What Is the Likely Future Relationship between Professional Music Teaching and Music Study?

Although space does not permit a full exploration of the issue here, there is a research base supporting pedagogical training.¹⁹ Such preparation professionalizes intuitive music teachers by making their instruction deliberate and better adapted to the diverse needs of the entire population, including those who are uniquely motivated to study music. Learning for all becomes accelerated and more efficient. Teachers converse about pedagogy, and there is efficiency in any specialized professional vocabulary. In pedagogical communication, common goals emerge along with shared strategies for reaching them. New knowledge of learning processes employs deliberate alternatives to the skills-dominated methods of intuitive learners, "self-taught" musicians.

What would music in society be like in 2020 if all music instruction programs were closed tomorrow, from kindergarten through graduate school? Would people still study music? Would America be better off? What are the unique functions of professional music teachers? How do sources for incidental music learning such as mass media or the Internet contribute to music study? How do these differ in their contributions to the "musical health" of our society?

Of course music study would continue if music schools and music in public schools disappeared. What replaces them would be an idiosyncratic mix of parallel musical universes that mirror the many categories of expertise and interest that cover our landscape now, from religious sects to motorcycle clubs.

The argument against musical eclecticism as a public policy is that we risk our society's cultural and social health by leaving music to the entertainment industry. As I have said elsewhere²⁰

If education is in trouble at the systemic level . . . then we must immediately begin to draw folks into action in large numbers or risk—what? Perhaps, we risk abandoning music education to some cultural processes that represent disturbing futures:

. . . to cultural processes such as the mass media that demand too little of general education,

. . . to cultural processes such as advertising that convince people to buy musical products that diminish rather than expand human musical potential,

. . . to cultural processes such as many government leaders' political interests that push us back to a tribal, xenophobic approach to musical living, when the information age moves us in just the opposite direction, and

. . . to cultural processes such as retailing and commercial broadcasting that indoctrinate us with the commercial view: that musical insights should be no deeper than one's childhood appetites and no wider than the personal borders of one's convenient lifespan.

Music teachers can meet these challenges by adopting what might be called a "public health" approach to their work. That is, K-12 music teachers, especially classroom music teachers, are in professional contact with the entire population. In addition to the expertise that the teacher provides directly to students, he or she has the tools and should have the motivation to discover and evaluate the community's musical resources. Music teachers, more than any other occupational group in music, have the professional expertise and the opportunity to equip both future citizens and whole communities for liberating, powerful musical lives.

How Can the Institutionalization Process of Music Study Be Strengthened in Our Society?

The public policy justification for music study revolves around only a few basic questions, some of which were addressed above. One that remains is: At what developmental point should music study become deliberate and professionally guided?

Music study for infants, a policy in parts of northern Europe, and practiced informally in families everywhere, is becoming increasingly institutionalized in America. The "Mozart Effect" has given new impetus to infant and toddler music education, and we have long known that sound imprinting occurs before birth.

Music teachers know professionally that an early start in music has lifelong benefits not only to musical growth, but also to general functioning. This and the growing body of music research accumulates to suggest that we adopt a "public musical health" perspective, where music teachers engage not only K-12 students but others—parents of infants, to name one group—as part of the work.²¹

Today, there are literally hundreds of well-written publications that promote music education. In spite of this, we are asking "Why study music?" This is evidence that we sense some gaps.

What is missing are ways to document the overriding importance of the individual-social musical process, and to de-emphasize the current focus upon various kinds of products, whether stated as "testable" outcomes, music performed in public, or changed brains. We need to find ways to convince others in the world outside our profession of the essential benefits of the process of music learning, investing them with enthusiasm for "walking the path" of music study.

As a whole profession, we must redefine instructional efficiency in terms of musical health, individual and societal, before we can be better advocates for our collective pedagogical insights and expertise. To do this effectively, we must remove the "either-or" formulation from our professional arguments. There is weak logic in an argument that forces choices—either the person or the society; either performer or listener; either producer or consumer; either curricular or extracurricular; either pop music or classical music. People whom we must persuade to our cause do not recognize these dichotomies as important. Music is "both-and," and our collective advocacy must be inclusive.

So, Why Study Music? What Does Music Study Do for Us as Persons and as a People?

Music study contributes uniquely both to the general and specialized education of people.

1. People create, communicate, and derive unique meanings from music. Musical actions are open-ended constructions. They arise from people's sense of meaningfulness. It takes study to broaden and deepen our ability to use music along with other ways to communicate our insights with and among people.

2. In music making, *product* is uniquely and intimately related to *process*. In both small units of musical behavior and large, the process of making music contains immediate and constant feedback, sets the foundation and generative impulse for subsequent actions, and reinforces both individual and communal actions by setting up musical products as problems or hypotheses rather than as ends in themselves.

3. Music study empowers all people. Music making of a high degree of insight and complexity is possible with a wide range of materials. Resources needed for music making are readily accessible, and deep musical experiences can evolve from free resources. The human voice and environmental materials afford primary means for making music, and study helps people to learn how.

4. Music study results in, depends upon, and rewards personal excellence. Music making puts craftsmanship in the foreground at every level of expertise. Expanding and growing skillfulness occupies a natural and prominent place in all degrees of musical complexity. In music making, evaluation is clear and public, and the standards are both

personal and sociocultural. Music study and music making are unique person-group settings for personal growth.

5. In spite of the public nature of music making, musical goals and the means to reach them are ultimately personal. Reaching musical goals confirms personal efficacy as it rewards disciplined action, sometimes over long periods of time. For all students, music study affords an expanded means of personal efficacy. For some people, music study is a crucial, primary pathway to personal development. Music study rewards self-discipline in a uniquely integrated experience of process with product and a uniquely powerful synergy of being with belonging.

6. Part of compulsory education's purpose is to promulgate cultural values, promote community, integrate people with society largely through cultural and social means, reduce isolation, and promote an advanced tolerance for diversity. Music study integrates these purposes in single actions. Good music study requires people to learn several important musical traditions, to engage the masters of these traditions, and to embody the means and the motivation to contribute to our culture's future by giving effectively to its present.

If there is a "bottom line" to all of this, we study music to give us as persons a reliable, thorough, and efficient way of becoming expert at creating, communicating, and deriving meaning musically in our human world. Musical expertise "matures" when we take charge of our own music learning program. We deliberately expand the range of musical experiences, and naturally and effectively mobilize our best musical resources in musical situations of a wide variety. The professional task for music teachers is to stay learner-centered, nurturing this human process until it flowers in a society full of musically expert people.

Notes

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1. In this paper, "music making" means music performance, composition, and improvisation. "Musicing," as used by Elliott (1994), and "Musicking" by Small (1998), include also dancing and listening. For a further discussion of this issue, see Gates (1991).

2. Paul Lehman's chapter in this publication expands on the issue of teaching toward the Standards.

3. See Swanwick (1991, 1994), Swanwick and Franca (1999), and Swanwick and Tillman (1986).

4. Regelski uses the term "praxis" for this way of seeing musicality. Praxis generally means "mindful action" or action based on judgment. As Regelski puts it (Spring 1998, p. 32): "Praxis, in this view, amounts to theory, judgment, wisdom, and knowledge put into action by and as a rational phronesis of 'good' or 'right results' for particular circumstances." Action, of course, suggests a contribution of skill; otherwise, the results Regelski describes would happen accidentally. However, musical technique building, in the praxial view, occurs in the process of doing music " . . . for particular circumstances . . ." not developed in the abstract, isolated from music making with the implication that one is building skills that some day one might find useful. Praxially built skills are applicable to future music making but are not abstracted from it in "scale studies" or "technic-builders." That said, where weak skills block musical expression, the learner diagnoses this and attacks the problem, perhaps with help from others; but he or she does so intentionally, with a musical application in mind. He or she studies. The term phronesis refers to the application of judgment through the options that occur naturally and become guiding in a mindful act before, during and after the action. See also Regelski (Fall 1998).

5. Smith (1997) challenged the relevance of most available music research to our understanding of novices. He found that most "music science" used musical experts, rather than novices, as the point of reference in the rationales, and he proposes new directions, including a re-examination of such beliefs as octave equivalence.

6. For a brief summary of the current intelligence/music rationale, see Gromko and Poorman (1998). See also Rauscher (1997)

7. Two recent symposiums are the Ithaca Conference'96: Music as Intelligence (Brummet, 1997) and The 1999 Charles Fowler Colloquium— Enlightened Advocacy: Implications of Research for Arts Education Policy and Practice (16-17 April 1999, at the University of Maryland, College Park).

8. Clifford K. Madsen, personal correspondence, 9 April 1999.

9. Abeles, Hoffer, and Klotman (1994, p. 262). Here, they are summarizing findings from Madsen, Greer, and Madsen (1975), and Madsen and Prickett (1987).

10. Wayne Bowman, Lucy Green (1997), and Eleanor Stublely are among those developing newer theories of musical embodiment, taking musical experience and human functionality to new levels of integration.

11. Studies in support of this use technologies that include neural mapping, brain chemistry studies, blood flow studies, using PET, MRI, EEG, CAT, etc. See Hodges (1996), ch. 7, for a solid overview. Both Hellmuth Petsche and John Holahan and their collaborators have published various studies using such technology, as have Donald

Hodges and others in the Institute for Music Research (IMR) at the University of Texas, San Antonio. Michael Wagner also works in this arena.

12. See Gordon (1987) and Walters and Taggart (1989) for definitions and accounts of what Edwin Gordon calls developmental music aptitude.

13. See Swanwick (1991, 1994), Swanwick and Tillman (1986), and Swanwick and Franca (1999) for crosscultural research in music composition and listening development. See Green (1997) and Kemp (1996) for thorough explorations of musicians' personalities in Western music's "schooled" traditions. Alas, few psychological studies of this scope are available in the "unschooled" tradition, but see Keil and Feld (1994) for what will prove to be a groundbreaking ethnographic and social psychological analysis of vernacular musical behavior.

14. See Howard Gardner's discussion of how this works in Brummett (1997, pp. 1-30).

15. See Searle (1994) for a good analysis of the brain-mind issue and Dissanayake (1988, 1992) for applications of genetics to the arts.

16. Thanks go to Jennifer Davidson for suggesting and contributing most of this list.

17. See Brummett (1997, p. 21).

18. See *National Standards for Music Education* (Consortium of National Arts Education Associations, 1994; and Music Educators National Conference, 1996) for more detailed lists. See also chapters in this book by Paul Lehman and Cornelia Yarbrough.

19. See Colwell (1992).

20. Gates (1998).

21. John Feierabend, Donna Brink Fox, Edwin Gordon, Lili Levinowitz, and other leaders in the practice of working with infants have developed teaching procedures based on their own research and experience, continuing a practice that builds on pioneering work by such people as Donald Pond and Robert Petzold.

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Note: The books and articles selected here are among many of relevance to the topic, and this list is by no means exhaustive. It represents an attempt to connect the science of music learning and teaching with the belief systems of music in the Western tradition. In addition to the books, there are many excellent journal reports of research exploring a manageable number of experimental variables in music learning. The items listed here were selected from music research journals since 1992 if the primary purpose was (a) to review or critique current or recent research in music learning, or (b) to provide an

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