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Joining Forces: A Collaborative Study of Curricular Integration

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Abstract

The collaborative action research reported here strives to extend a prior study that dealt with the effects of integrating a general music course of study with the total curriculum of a first grade class. This second study used a similar plan in which a fifth grade teacher and a music teacher worked cooperatively to provide a curriculum that consistently integrated all subjects, including music, in a cohesive instructional plan. As before, the classroom teacher and music teacher planned and taught together through two years, crossing the traditional borders that usually keep music and the general classroom course of study separated. Teacher journaling and classroom videotaping showed improved student behavior and work ethic as the study progressed. Additionally, the collaboration necessary for the planning and teaching of the combined curriculum promoted innovative and energetic instruction and also mitigated the sense of professional isolation common among both elementary and music teachers.

Introduction

Historically, one goal of education has been that students acquire an understanding of the basic, overarching concepts that describe and explain across subject boundaries (Beane, 1995; Eisner, 1991b; Gardner, 1999; Morris, 2003; Simon, 2002). Elliot Eisner (1991b) criticized the tendency of U.S. schools to compartmentalize instead of integrate: "...We organize curriculums to almost ensure that a student who is enrolled in a class in U.S. history and in American literature may never suspect that there might be a relationship between the two" (p. 79).

Throughout the 1990s, much was written on the value of integrating subject matter through interdisciplinary study. For example, the MENC (now NAfME) document outlining national standards for music in the schools (Music Educators National Conference, 1994) asserted that elementary (K-4) students should:

- (a) identify similarities and differences in the meanings of common terms used in the various arts, and
- (b) identify ways in which the principles and subject matter of other disciplines taught in the school are interrelated with those of music". (p. 15-16)

Barrett, McCoy, and Veblen (1997) agreed, writing:

[S]tudents' educational experiences are strengthened when both generalists and specialists attend to the potential of disciplines within the curriculum to connect and cohere. For interdisciplinary understanding to flourish, teachers must share a collective responsibility for and commitment to integrated forms of study. (p. 16)

This paper is a report of a collaborative action research project that integrated the general music curriculum with the total curriculum of a certain fifth grade class of students. One goal of the project was to elicit heightened student interest in class work by making more apparent the connections among the subjects in their fifth grade curriculum. We hoped to demonstrate the unified nature of knowledge while still concentrating on the fundamental concepts of each area of study. A second goal was to encourage collegiality and an exchange of teacher knowledge between the classroom teacher and the music teacher, thus mitigating the perceived isolation common among many elementary teachers.

Background

An earlier study explored ways to integrate elementary music instruction with the general studies of a particular first grade classroom without neglecting the major curricular goals of music (Miller, 1995, 1996, 1997a, 1997b, 2003). The methodology of that prior study was an

action research model used to foster collaboration between myself (as music teacher) and the first grade classroom teacher, who was a veteran teacher oriented in the whole language approach. Together, we identified points of similarities between the total curriculum and the music curriculum in order to help our students make cognitive connections among the various subjects. As Fogarty (1992) described it: “The integration is a result of sifting related ideas out of subject matter content. The integration sprouts from within the various disciplines, and teachers make matches among them as commonalities emerge” (p. 56).

At the beginning of the earlier study, the first grade teacher and I wondered if there would be enough truly authentic points of intersection between the music curriculum and the classroom curriculum to construct a substantial course of study. Integration, we agreed, should not be forced for the sake of any study or to support a hypothesis. Experts (Barrett, McCoy, and Veblen, 1997; Willis, 1994, 1995) affirmed that points of intersection should be natural similarities inherent in the curriculum, rather than manufactured, whimsical, or merely topical relationships. The first grade teacher and I also knew that, to be worthwhile, integration of music into the regular classroom should augment and enrich the children's learning in both music and non-music curricula, facilitating acquisition of the major concepts in every subject area. We hoped that our collaboration would spark increased enthusiasm for learning in our class of children.

In the course of this earlier research period I learned much about the process of integrating general music with the total elementary curriculum and, synthesizing all that I read and experienced in my classroom, I developed a model of integration as an assortment of five types of connections: topical, related skills, conceptual ideas, higher order thinking skills, and pedagogical. Briefly, “topical” connections are what people often think of as integration—that is, connections pertaining to topics, such as weather, animals, or holidays. “Related skills” refers to understandings or skill sets that are common to two or more subjects, such as the similarity between antecedent/consequent phrases in music and interrogative/declamatory sentences in language. “Conceptual” integration involves broader understandings among subjects, such as form or line. Integrating through “higher order thinking skills” means that cognitive skills are valued and purposely cultivated in students by both instructors through such common methods as Venn diagrams or cognitive mapping (Hyerle, 1996). Finally, “pedagogical” integration occurs when both teachers believe in the same basic assumptions about their roles as educators and employ many of the same teaching strategies, such as cooperative learning or peer tutoring. Using that five-part model, the first-grade teacher and I found many authentic and interesting ways to integrate music and the first grade classroom curriculum.

At the end of that initial two-year study, there was no statistically significant difference between the amount of conceptual musical knowledge acquired by the integrated class compared to the three control classes of first graders, as judged on the evidence of the quantitative post-testing. However, student comments and body language seen in videotapes of the research class consistently demonstrated higher levels of enthusiasm and attentive behavior than those seen in the three control groups of children. Much of that unmistakable enthusiasm and involvement was a result of connections they perceived and verbalized. A surprising and gratifying outcome resulted from the collaboration necessary for the integration to occur. The classroom teacher benefited by what she learned through observing the children in her class as I taught them, and I grew more skilled as a constructivist educator through close collaboration with that highly skilled teacher. The close affiliation between us also helped to markedly alleviate the inherent loneliness of itinerant music teachers and sequestered classroom teachers (Miller, 1997a; Sindberg and Lipscomb, 2005).

While there are written descriptions of successful schools that model arts integration, there are only a few other research studies that speak to the efficacy of integration, or interdisciplinary curricula. According to Ellis and Fouts (2001):

Experimental research on interdisciplinary curriculum is very difficult to conduct and, therefore, rather rare. The interdisciplinary curriculum is, itself, a large holding company of educational variables that, put together, defy classic research methods that attempt to isolate a single variable to show some degree of cause and effect. ...At this stage, the number of thoughtful empirical studies...remains so small that any kind of meaningful meta-analysis that might point to some generalized findings is precluded. Thus, ...it is impossible to generalize from them to the overall efficacy of the integrated curriculum. (p. 24-25)

Nevertheless, a few examples of school districts that are successfully integrating the arts into the general curriculum can be found, such as Bresler (2011), Feller and Gibbs-Griffith (2007), Levin (2008), Mishook (2006), and Shuck (2005). One exemplary example found in Bresler (2011) describes a program of curricular integration in Martinez High School in Texas. Located in what was reputed to be the poorest economic area in the United States, Martinez served a highly transient student body where 90% of the students were at-risk and where the scores on the state assessment tests at the outset of the research were the lowest in the state. In her research, Bresler found that the curriculum was being re-conceptualized around concepts and themes “in a manner consistent with the thematic integrity of each unit. The integration style in the three arts subjects (music, visual arts, and drama) revolved around the broad themes of class, gender, ethnicity, family, and propaganda” (p. 7). Class work was designed to be of intense interest to the students, and resulted in a heightened sense of

academic ownership by the students, even to the extent that they would self-discipline in order to focus on their studies. Student attendance grew as their enthusiasm increased and, consequently, the school's scores on mandated assessment tests rose dramatically.

In another study, Feller and Gibbs-Griffith (2007) report on the success of their integrated program of drumming, teambuilding and counseling, and community service "to engage students, improve achievement and morale, and teach important life skills" (p. 48). In addition to anecdotal reports of observed improvements in disruptive or negative behavior among the participating students, this study reported a 47% drop in discipline referrals and a 67% drop in school suspensions.

Goals of the Study

My purpose for this second study was to experience a collaborative, integrative program at the fifth grade level with a different teacher in another school. I wondered if fifth graders would exhibit the same excitement and interest when they perceived connections among subjects as the first graders had displayed. I also wanted to find out if the integrative process would again nourish the collegiality that had so enriched and informed teachers in the prior study. The question of academic growth was not addressed in this study, as it had been in the previous setting, because this situation did not present the possibility of control groups for comparison. Instead, the only questions, as stated above, pertained to the effect of a highly integrated curriculum on student interest and behavior and to the effect of collaboration on teacher enrichment.

Setting and Methodology

This second study took place with the only fifth grade classroom in an elementary school of about 120 students. The district administration was slowly phasing out use of this vintage school building by gradually transferring students and teachers to three newer district schools. The experienced fifth grade teacher, Lyn, felt isolated as the only teacher at that grade level still left in the building. This feeling of professional isolation, so frequent among teachers (Eisner, 1991a) and heightened among music specialists (Sindberg and Lipscomb, 2005), made her amenable to a team teaching approach. As the only general music teacher serving several schools, I also felt the separation endemic to arts education professionals. Lyn's fifth grade class was small (18-20 students) and consisted of children primarily from the lower middle class, according to school records. The area feeding into this older school was one neighborhood in a community of about 10,000 in a relatively isolated and rural part of the state.

A reflective, spiral research design fit the nature of the teaching situation because, although we planned the lessons carefully, we responded with flexibility to unforeseeable factors, such as student needs, teacher insights, and school district scheduling. The qualitative nature of the inquiry also suggested that we would interpret what occurred according to our own knowledge of the reality that existed with regard to the specific students, school and community, and make adjustments accordingly.

The research model could also be described as collaborative action research because Lyn and I worked closely together throughout the planning, instruction, and assessment phases of the study. We felt that we matched Rideout and Feldman's (2002) definition of action research as "systematic inquiry by practitioners to improve teaching and learning" (p. 882). Two main themes may describe our action research model: collaboration and the cyclical relationship between reflection and action.

Collaboration was at the heart of our inquiry, for we needed each other in this endeavor. In earlier teaching situations I had sometimes tried to connect music activities with the various classrooms I entered by questioning students and teachers or by observing their classroom to ascertain what they might be currently studying. But that method of integration only results in a superficial sort of topical integration, relegating music to a "handmaiden" status. In this study I desired deeper conceptual, cognitive, and pedagogical connections—and for that it was necessary to work closely with the Lyn in a consistent, interpretive, and democratic collaboration.

In action research, reflection and action alternate in a spiral fashion throughout the course of the inquiry (Kemmis and McTaggart, 2000). Reflection results in action; action necessitates further reflection and re-evaluation of the direction of the study. In our case, my once-weekly visit to Lyn's school provided the opportunity to put our teaching plan into action, and to review what we had seen in the music lesson. We discussed how the students—as a class and as individuals—had reacted to the lesson, what Lyn had done in my absence to correlate music with the other subjects, and how we felt we should alter the next lesson to accommodate student response.

A crucial part of the research design was my ongoing teaching journal. Throughout the two-year period that comprised this integration inquiry with Lyn, I kept a written record of teaching episodes, student responses, discussions with Lyn, and my own thoughts. This kind of reflexive journal is one of the techniques for establishing trustworthiness recommended by Lincoln and Guba (1985): "...the reflexive journal [is] a kind of diary in which the investigator on a daily basis, or as needed, records a variety of information about *self* (hence the term 'reflexive) and *method*" (p. 327).

This research also closely mirrored a narrative inquiry model because it was intensely situated and personal—intended primarily as a vehicle for understanding, sharing, and improving our own teaching practice. Reading through my journal later, I realized I had told the “little story” (Bowman, 2006) of our two years of interaction with each other and with our students. In Bowman’s (2006) words, “As accounts of circumstances, meanings, actions, and events that are situationally and temporally-grounded in the here and now of personal experience, little story doesn’t aspire to occupy the same turf as grand theory” (p. 9). Additionally, my space in the center of the instructional picture throughout the research period matched Clandinin and Connelly’s (2000) advice that “one of the first things that narrative inquirers do is [to]... position themselves...in the midst” of the research work (p. 100).

In addition to the teaching journals, data included student artifacts, student assessments, teacher observations of student reactions, audiotapes of student compositions, and videotapes of class sessions.

Year One

Having completed the long-term study on integration in the first grade classroom described earlier, I was enthusiastic about finding a collaborator for a new but similar research project with students of a different age level. Since Lyn’s closest colleague, the other fifth grade teacher in the building, had been moved to another school, Lyn missed the support and stimulation of a teaching partner. Our first meeting seemed favorable, but by the time school began we had not been together long enough to have made any definite plans. Nevertheless, we had already begun to imagine:

On Tuesday I had a good first talk with Lyn. Happily, one of her goals for this year was to help the children see that school and the "real world" are really connected. She said that, in good conscience, she couldn't turn down my suggestion [to work together] without compromising her own objective. Some of her fifth graders are already causing quite a bit of trouble in class and around the school, as they did in previous years. We dreamed about a collaborative, integrative unit that would challenge and interest them enough to help straighten out their behavior patterns. (B. Miller journal, Sep. 16, year 1)

With no long-range plans at that point, Lyn and I both felt that our first priority would be to address the behavior problems in her classroom.

We are both worried about the awful attitude of the 5th graders. With only 2 or 3 exceptions, they fall into 2 categories: the cocky, sneering, bored group who dominate

any discussion but tend to discount anything any adult says, and the quiet ones who have given up trying to compete with the first group and do not participate in much of anything. All in all, a bad situation for learning. We decided to sneak up on them, because a frontal attack (Today we are going to...) has, so far, brought either defiance or lethargy.

First, a short plan for immediate use today. I had brought my "Carnival of the Animals" video, as planned, because some of them are studying a story about a trumpeter swan. Here's how it went:

I popped into their room right before lunch on the excuse that I wanted to read the rest of the swan book--"Could I borrow a copy? Oh, by the way, I have a little video clip of a swan." "Really!" said Lyn, acting well, "I'd love to see it. C'mon, class, let's go watch it in the library!" They watched the segment, although some did not attend very well. She led the few who would follow into a discussion of the swans as presented in the book and compared to the film. She worked around into the instruments and whether the cello was a good sound. She wondered why some instruments sound like certain animals to us.

She and I (trying to include the students in the idea) agreed that they would construct a chart predicting what instruments would play the parts of all the animals on the "Carnival of the Animals" film if I would provide a list of them. Then I will show the whole video next week to see how they did. As we talked, several different students wandered off: 3 lined up at the library door as if to say it was time to go; 1 or 2 paired up behind bookshelves to carry on their own conversations. I thought it was shocking. What will interest these kids? And if not interested, what has happened to ordinary polite attention?

Later in the day, during their music class, I was talking about the instruments of the band and orchestra. What would you have to change to turn a band into an orchestra? "Throw them all out and get a rock and roll band!" was the impertinent answer. Trying to make authentic learning and follow constructivist precepts, I answered, "Okay, let's make a rock and roll band. Now what instruments would you keep?" Of course, the person who started it was just being smart and didn't really want to go into it, but I persevered. In the ensuing discussion, they obviously didn't accept that flutes might possibly be in rock and roll bands. Naturally, since they'd never heard of Jethro Tull [and that performing group's consistent use of flute], they seemed to think that I must just be stupid. (B. Miller journal, Sep. 24, year 1)

Lyn wanted her students to use technology in her classroom and also to practice writing research reports. Following the “Carnival of the Animals” project and coordinating with my unit on orchestral instruments, she used a CD-rom program that referenced many orchestral and ethnic instruments from around the world. It included pictures, history, and authentic sounds of all the instruments. This CD-rom, in addition to other references, gave the students enough material to begin their research reports on an instrument of their choice. When we studied Benjamin Britten's "Young People's Guide to the Orchestra" in music class, they were surprisingly engaged. I heard remarks such as, "Here is a picture of the instrument that matches my report!" I wondered if this new attentiveness could be at least partly attributed to the integration and/or the collaboration between Lyn and me.

When Lyn and I met at 7:15 again, she, too, felt that some of the improved attitude may be because the class sees the two of us working together, that they may think that they can no longer put anything over on us because we are communicating with each other.

Or, we wondered, is it the integrative process that is capturing their attention? Is it the meeting of the topic in several disciplines that produces saturation and, thus, finally, interest--despite themselves?

We talked about Joe and Tom. They are 2 boys who are usually discipline problems, but both showed high interest in yesterday's lesson. Tom correctly and independently identified several instruments by sound and was delighted when I complimented him on his good ear. He even reported that compliment to Lyn when she returned to the music room to join us. Joe also attended well and identified several instruments against the flow of common wisdom, including the viola. When the kid next to him laughed about the pronunciation of "viola", he retorted quietly but firmly, "Well, that's what it's called." (B. Miller journal, Oct. 3, year 1)

By November the fifth graders were studying the American Revolution in their social studies class. My journal describes some of the ways I connected with that unit:

In music class, the fifth graders have continued studying the American Revolution unit, matching the social studies curriculum. One day we heard the “The Midnight Ride of Paul Revere”—both the trade book (Longfellow/Rand, 1990) and the music (Phillips, 1934). They were hard to interest (as always). The book seemed to hold little interest, although *I* thought its pictures were wonderful. In answer to the question, "If you were the composer who wanted to describe Revere's ride with music, what would you do?", they predicted such expected answers as "use a drum" and "make quick

tempo changes". The part that seemed most interesting to them was the frequent rhythm in the music that seemed to chant, "The British are coming; the British they are coming!"

In the following lesson, we reviewed the Revolutionary songs, "The Riflemen of Bennington" and "Soldier, Soldier", and added "Johnny Has Gone for a Soldier" and "Chester". I reiterated the basic concepts that (1) people sing about what is important to them at the time, and (2) music can serve to inspire people to patriotism and bravery. At first only Allan and Brad seemed to understand about the "music inspires" issue. Then I said, "Just think about how it makes you feel when the band plays at the basketball games."

Another student: "Yeah, and at the hockey games!"

Tom: "Yeah, Dan brings a radio to the locker room during hockey games and plays it real loud."

Me: "How does it make you feel?"

Tom: "Excited and like I want to play real hard." (B. Miller journal, Dec. 9, year 1)

By midyear, it was time to really look at what had happened, as well as outline the rest of the term, so Lyn and I met outside of school to confer, plan, and express any doubts.

I met with Lyn at my house over Christmas break and asked her how she feels about our project now that we have almost gone half a year. She said that she had been feeling dissatisfied because we were not seeing immediate and dramatic results. I realize some change results from sudden insight, but most change must result from slow evolution and persistent thought.

Still, she agreed that the children seemed a little more engaged, perhaps, and were starting to pick up connections--but she seemed unsure even about this statement. I feel the same way, to some extent. I really don't know how much advantage integration is to the academic side of teaching. We both agreed, however, that the discipline seems better when we are collaborating. The kids seem to realize that we are talking and working as a team. If that is all we gain, isn't that enough?

When I look at the semester's work with Lyn from the standpoint of my categories of integration, I realize that we have used several kinds, such as:

1. topical integration (Revolutionary War; instruments)

2. conceptual integration ("People make up songs and stories about those things which are important in their lives" and "The sound of instruments depends upon their material, size, and shape.")
3. pedagogical integration (cooperative group work and class discussion) (B. Miller journal, Jan. 8, year 1)

The second semester brought interesting math connections. In Lyn's math periods the students were learning about fractions. We used manipulatives called "fraction fringes" as personal reference tools to strengthen tactile and visual input as we worked with fractions in math class and with rhythmic notation in the music period. I was gratified when Lyn told me that this group was doing better than most of her past students on fractions, but neither one of us knew exactly what to credit. Were they better because of the music connection, the fraction fringes, the level of their knowledge upon entering fifth grade, or a natural affinity for math?

Throughout the year, Lyn and I not only planned units and reflected upon results as a team, but also were often in the room together. Rather than using music as a break, as was usually the practice of classroom teachers in my district, Lyn frequently would spend the music period working alongside me. What fun to play off each other's enthusiasm and to see it transmitted to the students! The following journal excerpt conveys the success of such partnering:

This past week Lyn and I modeled the assignment for the day. She composed 1 measure to be used as an ostinato, modeling how to make it easy enough to be able to play it against my part. Then I composed 4 other measures—all different—to play as she performed her ostinato. We modeled using our fraction fringes to help this composing. Then we performed our composition using 2 different found sounds for contrasting sounds. The children jumped right in and worked the problem out with their partners. Joe and a few others had trouble staying on task without bothering others (although not any more than usual), but they managed to all finish composing in time to have a concert of all the pieces within the class period. Some did not actually play what I had seen on their papers, but their papers were correct and their playing was okay, so I let it go.

The pair that really blew me away was Kyle and Tom! Kyle, bright but often lackadaisical, focused on the task and completed the writing with plenty of time to practice. Tom, despite his special education status, seems very aurally centered and has done well in music all year. He was secure in his ostinato and really kept a

remarkably steady beat to accompany Kyle's part. At the end, I asked if I could take them to my room to videotape their performance. * I wondered if they could perform it the same way again, and was pleased to find that they could duplicate it. In fact, when I asked if they could play it twice, Kyle suggested that Tom should not only begin before him as an introduction (which all the groups had done), but should play an interlude before Kyle repeated his part a second time. They performed flawlessly! (B. Miller journal, Mar. 10, year 1)

Vygotskian theory suggests that students' attitude toward learning improves if those people who are important to them agree that the learning is worthwhile (Kozulin, 1990). Except for parents, classroom teachers spend more time with the students than any adult, eventually becoming extremely important to the child's self-image. Therefore, it may be that teachers send a powerful, if nonverbal, message to children when they leave them at the door of the music room and walk away. That action may unintentionally imply that the music (or art) class is not important enough to interest the teacher and therefore, by extension, may not be very important for the student, either. In our case, it might be hard to distinguish whether the students' willingness to strive for success in this and other music lessons was a result of the integrated nature of the subject matter or the interest and willingness modeled by their classroom teacher.

Lyn also gave extra time to music projects during the part of the week I was away at other schools. Her willingness not only to devote the class time, but also to continue work on the music project on her own was unheard of in my professional experience. I believe what made it possible for her to feel comfortable to allot that time was that my music curriculum was also her curriculum.

The unit that most benefited from her willingness and ability to continue work throughout the week was the last project of the year: a unit combining poetry and music composition. Using the first stanza of Christina Rossetti's poem, "Who Has Seen the Wind?", we worked as a class to determine the long and short sounds in the rhythm of the text. Next, we converted the text to traditional rhythmic notation. Finally, we began writing individual melodies for the rhythm, using metallophones and nine electronic keyboards borrowed from the high school's music lab. This unit not only let us review our rhythmic notation, but provided authentic opportunities for mini-lessons on time signatures, writing melodies, finding the tonal center,

* The video of Kyle and Tom performing their rhythmic composition can be viewed by clicking on the following link: <http://www.ijea.org/v14si1/v14si1-9.mp4>.

writing their melodies on staff paper, learning that a set of lyrics may be set to music in multiple ways, and so on. The writing down and recording of their pieces completed the cycle. When they were finished, each child's melody was recorded on an audiotape for him or her to keep. Whether discussing music reading or text reading, the cycle consisted of (a) learning to decode musical notation or text, then (b) encoding their own musical ideas or words so that (c) someone else could decode it in order to perform the original music or written ideas. This composition unit gave us all a sense of satisfaction at the end of the year, and was approached with serious diligence by all the students—even those who had been such trouble-makers early in the school term. The classroom climate was markedly improved compared to the beginning of the school year.

Last Monday the 5th graders worked some more to get their "Who Has Seen the Wind?" pieces transcribed to staff paper. While Lyn helped them, I began taking them individually to the music room to tape their compositions. They were so interested in hearing their own piece on tape! Even Joe entered the room without his usual bravado and swagger. Mike was nearly beside himself with pride and excitement! They all wanted me to play and sing it onto the tape, but they are all practicing to play it themselves for the class. The melodies they have written are all satisfying in their own ways. Some are easier to sing than others, but all find closure on the tonic and all conform to the words. I am extremely pleased with the amount of ownership and learning that is going on! (B. Miller journal, Apr. 28, year 1)

Year 2

After what felt like a successful, if somewhat serendipitous year, Lyn and I agreed to continue into year two with more comprehensive plans than we began with last fall. During the intervening summer, therefore, we met to design our second year's curriculum. Our goal was to integrate even more components of the fifth grade curriculum as often and as deeply as possible through authentic connections. We began by inspecting her new reading text. The stories in it were divided into sections that seemed interesting and potentially integrative, such as "Worlds of Change" and "Scenes of Wonder." Therefore, we adopted the text's unit names for our instructional segments and built the year's program around those ideas.

Next we added the social studies curriculum to the reading units, breaking with ordinary procedure by progressing from the present time back through history. Lyn had bemoaned the fact that each year her classes failed to reach the most recent historical time periods in the last chapters of the social studies book, so we decided to work backwards. This reverse order reflected our constructivist viewpoint that learning should have meaning and relevance to a student's present life and should progress from known to unknown information.

Then we added the other subjects: music, health, science, visual art, math, and drama. The art teacher was eager to follow the art curriculum we had suggested. Except for music and visual art, Lyn would teach all the subjects.

Finally, we decided upon some overarching components that would permeate our curriculum throughout the school year. These would be poetry, music listening in the context of the regular classroom, student composition in music class, an oversized boy and girl paper doll that would represent the class in authentic dress during each historical time period, and a “hero” theme. We also began initial plans to share a culminating “Heroes Banquet” with the second graders at the end of the school year. At this banquet, the fifth graders would portray heroes through language, art, music, and drama.

With the curriculum devised and an approximate timetable proposed, we began the school year with a new class consisting of much more cooperative students than last year’s class. From that point on, we discovered that a few minutes before classes on the days I attended that school was usually all we needed to proceed with our plan. A quick “Are we on schedule?” when I arrived assured me that I could go ahead with the music lesson as planned. Like the first year, the collaboration seemed to spur me to be inventive, to energize me in class, to focus me on the overall year’s curricular design, and to reflect on successes and failures. However, with our summer planning behind us, we both seemed to feel more in control. Lyn really began to take charge of the total curriculum. She had mentioned once during the first year that she likes the integration, but also likes to control her own class and her own curriculum. As an “itinerant” music teacher, I was happy to have her take charge, as reflected in this journal entry:

I'm really impressed by the way Lyn has orchestrated the 5th grade curriculum so far! We have flowed smoothly from (1) "What makes music music?" and the editing process to (2) instruments of the orchestra to (3) invented instruments to (4) biographies of famous composers. She has produced a progression that has logically evolved from one topic to another in a way that has seemed interesting to the children and immensely satisfying to me.

Each unit has focused on truly authentic connections among subjects in the curriculum:

- (1) making value judgments about prose and music;
- (2) editing text writing and manipulating musical elements to edit music;
- (3) researching and writing about musical instruments in both language arts and music class, then constructing their own instruments;

- (4) investigating scientific properties of sound and connecting the science curriculum with families and sizes of instruments;
- (5) researching and writing about composers and hearing their music.

Lyn has really organized this whole quarter's work and has done a super job! Best of all, the kids seem really engaged! We're meeting today to conference. (B. Miller journal, Nov. 9, year 2)

We chose to use some of the same activities as in year one, but often even the repeated lessons were altered or augmented. For example, we again studied Britten's "Young People's Guide to the Orchestra", but this year the unit included science and language arts components. The students studied the science of sound, built their own musical instruments outside of class, and gave written and oral reports on the process. Everyone enjoyed the final celebration described in my journal:

When the kids finished making and reporting on their own instruments, we designed our own piece modeled after the Britten "Young People's Guide to the Orchestra" that we had studied in detail. First the students placed themselves, with their instruments, into categories: winds, strings, percussion, and pitched percussion (bottles, xylophone). Then each group brainstormed how they wanted to perform during their section. Finally we performed and videotaped a Britten-like performance using, as he did, instruments playing in families, then playing individually down through the families, and then all playing together. Fun! (B. Miller journal, Jan.2, year 2)

Like the first year, one of our major units focused on each student composing an original melody for Rossetti's "Who Has Seen the Wind?" This year, however, we gave more preliminary lessons on note names and other related skills. As before, students were excited about the opportunity to work at electronic keyboards and applied themselves steadily during each session:

The 5th graders worked on their first compositions some more, with most doing the transcribing from letter names into symbolic notation. Tyler, usually a non-starter, sat right down on the floor with me and set to work with enthusiasm!

Matt had wondered in chorus class if the chorus lyrics could be arranged as poems, so Lyn had seized that "teachable moment" to have each child choose any chorus piece and write it down as a poem. When I arrived in her room the next time, we looked at some of them and compared the different ways students had set up the same poem and talked about the resultant "look" and sound of the poem. Lyn said that how you

arrange the poem on the page depends upon "what sound you're after". (B. Miller journal, Mar. 15, year 2)

During this second year our schedule even allowed for each student to compose his own melody to a second poem of his own choosing. Using the model that we had employed as a whole class on the Rosetti piece, all the individual students marked long or short lines over each word to match their reading voices. Then they found the important words and drew a bar line in front of them, thus creating the measures and determining the time signature. They then created a melody for their rhythm by labeling the rhythmic notation with letters. Finally, they transcribed this working copy into traditional notation. [A student sample of this process is found in Figure 1.]

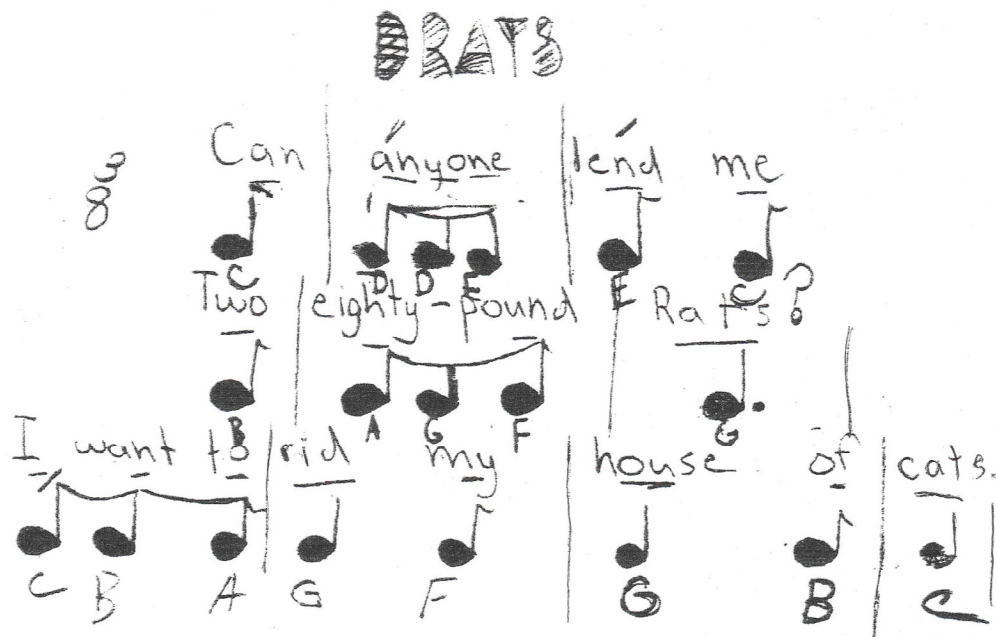


Figure 1. Composing process

It was exciting to see that, by now, some students also were beginning to realize the power of music to augment the expressive notions found in poetry. A few students were even able to talk about how they purposely chose a certain melody or rhythm to describe the words or feelings of their poem. This seemed to indicate not only a willingness to speculate in their musical choices, but an awareness of the descriptive power of the music. Although Swanwick and Tillman (1986) describe this awareness as "unlikely" before the age of 15, their description of that awareness seems to fit a couple of the students: "At the *Symbolic* level

there is a growing sense of music's affective power and a tendency to become articulate about this experience” (p. 333). For example, Josh explained that he wrote "Chipmunks" [see figure 2] with quick, steady quarter notes because "that is the way chipmunks sound", and also that he chose the repeated pattern in the first line to match the repeated words.

It was particularly gratifying to see the level of Lyn's involvement in this most deeply musical of all the projects in our two years of integration. While she had been attentive to all the projects and had taken part in most of the music activities to some extent, this individual student composing might have been considered a tricky endeavor even by some music educators. Yet one day she surprised us both by saying, "I can help the kids finish their compositions while you're gone this week!"

Discussion

Integration

In this study I once again found that organizing the inclusive term "integration" into subgroups (topical, related skills, conceptual ideas, higher level thinking, and pedagogical) provided the classroom teacher and me with a mental schematic of different kinds of integration as we worked toward a holistic curriculum that was authentically integrated. Thinking about integration as an assortment of subgroups broadened the range of possible intersections in our minds, which helped us to see more possibilities for connecting music with the general curriculum in ways that honored all subjects equally.

For example, the choice of "outer space" for the small group found-sound compositions was purely convenient and *topical*, since I could have used many different topics for the student composition theme. The fact that we taught rhythmic notation and fraction equivalencies during the same time period took advantage of the *related skills* inherent in those two subjects.

An example of a *conceptual* connection can be found in our study of instruments, which coincided with the science of sound unit. Promoting *higher order thinking* in our students was of utmost importance to both Lyn and me. We deliberately set up problem solving situations for our students and consistently used Socratic questioning rather than lecture. One can see many opportunities for higher order thinking in our plan. For example, we asked students to *compare* descriptive writing with how music can describe, to *classify* instruments by families, and to *deduce* how instruments work from principles learned in science class.

That emphasis on encouraging higher order thinking in our students also illustrates our *pedagogical* integration. Additionally, we were deliberate in our focus on striving for transmission of real-life knowledge. As constructivist teachers, we both considered ourselves

facilitators, rather than authoritarians, so we designed opportunities for students to work in pairs or small groups, we encouraged dialogue, and we used interactive materials. Lyn and I both felt that our similarities in philosophy--thus, in teaching style--helped the children see the curriculum as a holistic entity and, especially in the case of the first year, helped them view us as united in our insistence on good behavior and a high-quality work ethic.

Student Outcome

One of the goals for this project was to see if a tightly integrated curriculum would interest the fifth grade students like it had the first graders in the previous study. In fact, there were several factors that spoke to the beneficial effect of our integrated curriculum on student interest. First, the quality of the products—both musical and nonmusical--produced throughout the two years by the students showed a high level of interest and achievement. As Lyn and I designed units that highlighted the authentic commonalities among subjects, the students' interest was piqued. They enthusiastically composed original music for poems, contributed to group improvisations, constructed their own musical instruments, sang songs of the Revolutionary War period, and much more. At the end of the two years, the fine quality artifacts, such as their original melodies, indicated successful student achievement. Indeed, although most of these youngsters were no more than average and below average students on local and state assessments with virtually no students taking music lessons outside of the school setting, the time given to integrative and collaborative work resulted in the completion of more deeply musical projects than perhaps in any other year of my career.

Second, although the fifth graders were not as likely to shout and wave their arms at me when perceiving commonalities as the first graders, they frequently commented on similarities and connections. In addition, their improved behavior was witness to their interest. Those few students referred to in the local jargon as “bad actors” were drawn into the classroom activities despite themselves. What child can resist constructing three-dimensional space creatures that conform to the demands of a particular planet's atmosphere—and then composing music to match? Like the previous study, teacher observations and videotapes of lessons showed students demonstrating their interest through alert body posturing, on-task behavior, and enthusiastic verbal responses. Like the students at Martinez High School in Bresler's (2011) research and in the Feller and Gibbs-Griffith (2007) study, our students' interest in our curriculum offerings seemed to result in a desire to listen, to participate, and to self-monitor.

These real-life, daily observations, although not ascertained through paper-and-pencil assessments, led us to believe that our efforts at total integration were valuable both as educational tools and as behavioral modifiers. As Kemmis and McTaggart (2000) wrote:

The inevitability—for participants—of having to live with the consequences of transformation provides a very concrete ‘reality check’ on the quality of their transformative work, in terms of whether their practices are more efficacious, their understandings are clearer, and the setting in which they practice are more rational, just, and productive of the kinds of consequences they are intended to achieve. (p. 592)

Collaboration

In an earlier reflection, I wrote, “Initially expecting collaboration to be only a functional necessity, I was happily surprised to discover it was actually the bonus ‘toy’ in my crackerjack research package” (Miller, 1997a, p. 61). Collaborating on an integrated program of study is one way that teachers can mitigate a sense of isolation and gain new insight on the complicated job of teaching children. Lyn’s and my efforts to integrate the curriculum resulted in a new collegiality that helped to assuage our loneliness as the only fifth grade teacher and the only music teacher in the building. We not only helped each other through the two years of the study, but also established a history of friendship that served us for years to come as we continued to teach in the same district.

As in the prior study, I once again found myself watching and learning from an excellent classroom teacher. As a general classroom teacher, Lyn saw things through different eyes, and, therefore, she sometimes had a different reaction to what we saw in the classroom. Her big advantage was being part of the students’ lives during the majority of the week while I was serving other schools. Our frequent conversations also informed me: “As Lyn and I talk, I grow. Things come out of my mouth that I really did not yet consciously know.” (B. Miller journal, Apr. 6, year 1)

Throughout this two-year affiliation with Lyn, I was empowered to teach more stimulating, more in-depth units to her fifth grade students than I ever dared attempt without the help of a classroom teacher or within the usual fragmented one-period-a-week allotment of time. Bresler (2002) found the same results as she studied other teachers in collaborative situations:

The most obvious [transformation] was a change of roles for participating teachers in all sites—a heightened movement toward *developing*, rather than just implementing, curricula. In developing integrated curricula, academic teachers moved away from reliance on textbooks, and art teachers, from reliance on set activities and narrower, discipline-specific skills, towards a focus on larger projects, overarching themes, broad issues and questions. In this process, they also started to draw upon a larger array of resources. On a more fundamental level, they learned to listen to each other in ways that expanded their own vision of their discipline. (p. 27)

For me, the integrative situation produced excitement as I crafted and taught our large, involved units; informed my teaching expertise as I observed Lyn with her students; and made me feel that my music instruction (and, by extension, I as a person) was finally at the heart of the school's instructional program.

The students benefitted from our collaboration, too. It seemed to mitigate off-task behavior to have Lyn and me obviously working together. Also, because Lyn either gave the students extra time to work on their music projects or taught similar information in other disciplines, the students were better able to keep focused throughout the sequence of our music lessons from week to week. Again, I return to Bresler's (2002) research that found:

...integrated arts were characterized by students' active participation, both individually and as a group. [The students' enhanced ownership partly] lies in the transformation that the teachers underwent in their collaborations. [The teachers] having gone through this learning experience served as an implicit model of active engagement.... (p. 29)

In my situation, the effect of our collaborative work, happily, was more emphasis on music and more time for music for the students in those two years' of fifth grade classrooms.

Closing

Unfortunately, integration is still frequently perceived as various "topical" connections or, more superficial yet, as the use of musical jingles to teach skills or facts in the "core" subjects (Shuck, 2005; Stake, Bresler, and Mabry, 1991). Perhaps using the five categories--topical, related skills, conceptual, higher order thinking, and pedagogical--as scaffolding could assist other teachers who wish to integrate more authentically. The problem that arises, of course, is one of practicality. The job requirements of music and art teachers preclude integrating with many classes or grade levels at one time. Perhaps working collaboratively on one cycle or unit during each school year would be possible and fulfilling (Shuck, 2005; Willis, 1995). In the case of classroom teachers, arts integration and collaboration with arts teachers most often takes a back seat to a focus on reading and math in order to score well on mandated assessments (Matsunobu, 2004; Panaritis, 2009; Shuck, 2005; Whitaker, 2001). Many classroom teachers do not perceive that those "solid subjects" can still be taught well in an integrated curriculum.

Despite the difficulties involved, I believe that the benefits of integrating music with the general curriculum make it worth considering. I do not presume that what worked for Lyn and me will necessarily work for other educators. As Lincoln and Guba (1985) wrote:

The original inquirer cannot know the sites to which transferability might be sought, but the applicators can and do. The best advice to give to anyone seeking to make a transfer is to accumulate *empirical* evidence about contextual similarity; the responsibility of the original investigator ends in providing sufficient descriptive data to make such similarity judgments possible. (p. 298)

However, it may be that integrating music with the general classroom curriculum could provide increased motivation and meaningful learning opportunities for other students like it did for our fifth graders. Perhaps other teachers, too, would find that a collaborative effort would prove personally and professionally empowering and insightful.

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About the Author

Beth Ann Miller taught public school music for 39 years, with a special interest in elementary general music. She earned an Ed.D. in Music Education from the University of Illinois in 1995. Her focus on such topics as curricular integration, student composition, learning modalities, higher order thinking skills, and children's literature reflects her commitment to

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Dr. Miller has served on the editorial boards of *General Music Today* and *The International Journal of Education & the Arts*. She contributed a chapter to *Dimensions of Musical Learning and Teaching* (Boardman, ed., 2002) and has been published in *Research Studies in Music Education*, *Bulletin of the Council for Research in Music Education*, *General Music Today*, and *Teacher Research: The Journal of Classroom Inquiry*. Dr. Miller's most recent work includes a chapter on student composition in a private studio setting for Barrett and Stauffer's (2012) book, *Narrative Soundings: An Anthology of Narrative Inquiry in Music Education*.

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