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# Music Portfolios for Fifth Grade General Music Students: Assessment, Teaching, and Learning Tools

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*Abstract*

Research in 2001-2002 addressed how much information about elementary students' musical knowledge and ability could be gleaned from portfolios. Music portfolios and related classroom activities were examined using four methods: documents analysis, interview, survey, and observation. Findings: Deeper understanding of student musical knowledge, preferences, enthusiasm, and effort was gained through four assessment techniques: portfolios, interviews, tape-recordings of music performance, and colleague review. Portfolios helped students understand their musical strengths, facilitating informed decisions about their future music studies. Self-assessment of their performance skills required guidance. Finally, students needed but were rarely provided integrated arts experiences due to the school's test-oriented focus.

*Introduction*

The string family
Peaceful, soothing
Whistling, humming, loud!
Always brings applause.
Lovely

(cinquain poem by Mr. Baldwin's fifth grade class, September, 2001)

In the fall of 1997, when the rambunctious ten-year-old authors of this poem were in first grade, I began using portfolios as an assessment tool in my music classes at Volcano View Elementary School. Inspired by Howard Gardner's multiple intelligences theory and disgusted at being categorically dismissed as one who taught a non-essential subject, I hoped these music portfolios would showcase to students, parents, the public, the educational community, and my own sagging ego that important learning was occurring in my elementary music classes. In the five years that have passed since then, six-year-old students who traced oversized quarter

notes and quarter rests are now pre-adolescents capable of singing descants and identifying syncopation by sight and sound. This seems an appropriate time for me to assess my own assessment method. This research focuses on the fifth grade music portfolios at Volcano View Elementary for the 2001-2002 school year. The research question is as follows.

*Research Question*

How much information about students' musical knowledge and ability is gleaned by teacher and students alike through use of music portfolios with fifth grade students at Volcano View Elementary School?

Background Information

Volcano View Elementary is a neighborhood school in the center of a small, working class town in southwest Washington state. The town's predominantly timber based economy has been vulnerable for the past decade. Consequently, the most recent economic slowdowns have been devastating for the area. Local unemployment rates top ten percent.

Volcano View's student population includes a high number who might be considered at risk. Over fifty percent of the students receive free or reduced lunch, almost half come from single parent households, and twenty percent belong to minority populations. Also, a significant number of students change residences frequently. Any given classroom will exchange one fifth of its students over the course of a year because of this transient population. It is not uncommon for a student to attend Volcano View, move away, and return two or three times between kindergarten and fifth grade.

Superimpose this social profile with current school accountability demands and the challenge for classroom teachers at Volcano View Elementary becomes apparent. Test scores have become a huge consideration for all staff there. Curriculum, teaching methods, after school programs, and faculty meetings are all presently test driven. Classroom teachers barely have time to teach science or social studies, so precious little attention can be given to the arts.

Yet, from within this tense, constrictive learning environment come these sensitive, knowledgeable, and creative definitions from a fifth grade boy's music vocabulary page.

Bass - A background that sets the beat.
Symphony - The orchestra and band mixed together.
Jazz - A style of music that mixes instruments from all families
into playing music that is soft, with vocals.
Staccato - Robotic and rough.
Music - A spirit of beautiful noise that raises the heart and spirit
of everybody.

(Tom, portfolio entry, February, 2002)

*Rationale*

People need the arts. Art, dance, and music are part of every culture known to man. Parents notice that babies spontaneously make musical sounds and move, dance-like, to music before learning to speak or walk. Archeology tells us early man drew images

before developing language. These facts, plus all my intuition, added with our current test-driven educational atmosphere, the specific student population I teach, and the community I teach in all combine to make the role I serve as the music teacher at Volcano View Elementary crystal clear to me. That role is my mission, and it has four parts.

*My Mission as Elementary Music Specialist*

1. I am one member of Volcano View's staff-team which must impart basic social and survival skills to students growing up in a community with an uncertain future.
2. I am also a supporter of my fellow teachers who are in more prominent public view during these recent scrutinizing times in public education. Music has many natural connections with other subject areas, so I reinforce their teaching of language arts, math, science and social studies with my music lessons whenever possible or appropriate.
3. As the music teacher, I try to represent all the arts to students at Volcano View. On the elementary level, teachers serve as generalists. Subject teaching becomes more specific in middle and high schools. Therefore, I take responsibility for exposing my students to dance, drama, poetry and graphic arts, and try to represent those arts positively.
4. Most important, of course, I teach music. I think of myself as the sole representative of music in my students' lives. While this is not always the case, in some instances, it is absolutely true.

I planned the music portfolio entries, and classroom activities involved with them, to reflect, in some way, these four facets of my perceived role as elementary music teacher at Volcano View.

*Music Essential Learnings*

"Is there an approach to upholding and examining a school's standards that might actually aid learning?" (G. Wiggins, 1989)

Music is a subject which, as yet, is not tested by the state. Therefore, music teachers still have the luxury of designing curriculum to benefit learners, rather than prepare them to pass a test. It should be noted that the music Essential Academic Learning Requirements (EALRs) used by my school district are different from the arts EALRs prescribed as content standards by the state of Washington. Elementary music teachers in my district attempted to teach the state EALRs for several years and found them to be vague and missing the important content of music. The EALRs used in this research were written by my district's elementary music staff in answer to that problem (see Appendix A). My school district's music Essential Learnings organize the content of my teaching. Each music portfolio entry connects directly to one of these Essential Learnings. This way, the teaching and learning and the assessment are inextricably tied.

Here is a list of the fifth grade music EALRs used at Volcano View Elementary and assessed in the music portfolios.

Essential Learning 1: The student applies 2/4, 3/4, and 4/4 meter
Essential Learning 2: The student reads rhythms involving syncopated and dotted quarter/single eighth note patterns
Essential Learning 3: The student reads, sings, hand signs and plays on recorder, a diatonic scale
Essential Learning 4: The student sings simple descants or harmonies
Essential Learning 5: The student interprets, through performance, staccato and legato styles.
Essential Learning 6: The student recognizes the musical form, "theme and variations".

Essential Learning 7: The student recognizes orchestral families by sound.
Essential Learning 8: When part of an audience, the student demonstrates the ability to remain silent, be attentive, respond appropriately, stay seated and avoid distracting others.
Essential Learning 9: In a performance situation, the student demonstrates stage presence by entering and exiting, focusing attention and using body language appropriately.
Essential Learning 10: The student understands and uses appropriate singing and playing posture.
Essential Learning 11: The student performs pattern dances.

## Methodology

### *Data Collection*

For this research, music portfolios and the classroom activities connected with them were examined using four methods: documents analysis, interview, survey, and observation. The observation portion included two mini-studies, one of taped portfolios and the other of public presentation of portfolio entries. Although observation is the main method of data collection in those mini-studies, other methods are also used to a lesser degree. Ongoing validation was sought throughout this study from two outside sources: an undergraduate education student who volunteers in my classroom, and an expert in the field of music education, my husband, who is retired after a thirty year career as a music teacher. To ensure confidentiality, all names used in this report are pseudonyms. Written permission was obtained from all students whose work and words are used (see Appendix B).

#### *Documents*

In the documents section of this research, all entries of each student's portfolio were examined and analyzed. It was then determined if more was learned about each student's effort, accomplishments, and abilities in music by examining their portfolio than from classroom observations alone. Eighty-two portfolios were examined in this manner. Portfolios were grouped into two categories: those which revealed more information to the teacher (positive, negative, or confirming) about the student, and those which did not reveal more information about the student.

#### *Interviews*

Eight students were interviewed for this research (see Appendix C). The specific students interviewed were chosen because of the categories their examined portfolios fell into. Two interviewees' portfolios revealed more positive information about their musical accomplishments than classroom observations had. Two interviewees' portfolios revealed more negative information. Two interviewees' portfolios confirmed and amplified what I had observed about them in class. And the remaining two interviewees' portfolios revealed no more than I knew about them from class observations. All interviews were audio-taped, each lasting approximately thirty minutes. Validation was obtained by having each interviewee read and approve the scripted interview text.

#### *Surveys*

All students attending music classes on April 22 and 23 completed a ten-question survey concerning their opinions about their own music portfolio entries (see Appendix D). All student responses were graphed for each question on the survey to show general

trends in student preference and opinions concerning various portfolio entries. Survey questions were framed in such a way as to force students to analyze information concerning their own strengths, weaknesses, likes, and dislikes about music. Student self-awareness was the major goal of the survey; teacher awareness of student opinions was of secondary importance.

*Observations*

Two fifth grade music classes were videotaped for inclusion in this study. Some particularly interesting events or conversations were transcribed and validated on the spot in other music classes. Some classes were documented through notes taken in class and transcribed at the end of the day. The majority of observation for the general study, however, is anecdotal memories of events from fifth grade music classes over the course of the 2001-2002 school year. As an action researcher, all data collection happens over a backdrop of daily teaching activities. Observation will, therefore, always be a data collection method whether by design or not.

*Mini-studies*

Two activities which might extend the benefits of music portfolios are taped portfolios and public presentations of portfolios. I decided to try these two ideas as mini-studies involving sample groups taken from the larger population of subjects and include the results as part of this study. Technically, more than one data collection method is involved with each mini-study; however, since observation is the main method used, I will describe the procedures here.

*Mini-study, public presentation*. Students in Mr. Baldwin's and Mr. Johnson's classes, who had given permission for their portfolios to be studied, were asked to explain one page of their portfolio to Marci Bryant, my classroom volunteer. Presenters were allowed to choose which page to present. After each presentation, Marci wrote a short summary of the presentation she had just observed and a brief judgment of the presenter's effort and achievement. Some students in Mr. Nix's class presented a page of their portfolio to my husband, Harvey Redmond. I requested certain students present because I was intrigued by what I saw in their portfolios and wanted a different perspective on it. These presentations were audio-taped and transcribed later. The tapes were not transcribed literally, but were summarized and Mr. Redmond's opinion of the presenters' effort and achievement was included. Verbal permission to use their portfolio presentation was obtained from each presenter. All presentations happened during music class time as regular music activities were occurring in another part of the room.

*Mini-study, taped portfolio*. Paper portfolios seem an inappropriate means for measuring an auditory subject such as music. Since the beginning of my dabbling with portfolios as an assessment tool, I have persistently wondered if cassette tapes might be better suited for the job. Large numbers of students and lack of time and budget, however, made a tape option unworkable. This research prompted me to attempt a taped addition to the fifth grade portfolio for a selected group of students. I chose twelve fifth grade volunteers who indicated an interest in the project. To assure that this group was a reflective sample of the larger pool of subjects, I asked the three fifth grade classroom teachers if the student sample I had selected was representative of the entire fifth grade as far as reading ability and socioeconomic status were concerned. A few adjustments were made based on their advice. I financed materials for this project: two tape recorders, a microphone, two sets of earphones, and twelve cassette tapes, with money I receive for teaching an overload of students in some classes.

The students recorded themselves singing and playing a scale on recorder (EALR 3), demonstrating their understanding of *legato* and *staccato* in a method of their choice (EALR 5), and group clapping of combined rhythms shown on flash cards (EALRs 1

and 2). Recording sessions were held after school and during lunchtimes. Students answered a few exit questions after each recording session. Student assent and parent consent was obtained for this mini-study (see Appendix E).

*Teaching and Learning Implications Strand*

As a teacher, any action research undertaken holds implications for possible future use in my teaching. By design, several such possibilities are woven into this research study.

*Exit Interviews*. I referred to the interviews in this study as exit interviews because the protocol was designed as a summative assessment of the portfolio, with the student and teacher acting as partners in the assessment process. Keeping an eye toward feasibility, I chose to interview students either before school or during lunch, both times when most students would be free and willing to come. Part of this action research involves considering whether to incorporate exit interviews on a larger scale in the future.

*Surveys*. The survey, or questionnaire, protocol was designed to focus students on what they had learned about music by developing their music portfolios. The survey was simple to administer and results were easily assessed. If heightened student self-awareness or increased teacher understanding truly does result from the survey's use, it should be considered as a possible addition to music portfolios for other grade levels.

Public presentation of a portion of the music portfolio is under consideration as a possible area to include in the future as well as with other grade levels. Taped portfolios in some form are also being considered for future use in my teaching.

*Study Limitations*

The major limitation to this study was time. This comes as no surprise. Elementary music teachers, by the nature of their teaching schedule, are always pressed for time. At Volcano View, each class receives only one hour and twenty minutes of music per week. Time ran out before we could accomplish portfolio entries to represent EALRs 10 and 11, even though I had plans for them. Time was also a factor controlling methodology. Most of the student interviews took place between bites since the lunch half hour was the only time in our school day when fifth graders and I were both free of class responsibilities. Similarly, the taped portfolio sessions which didn't happen during that same lunch half hour had to be squeezed between school dismissal at 3:10 and Volcano View's popular after school programs which begin at 3:40. In spite of the time constraints, however, I feel the data gathered is sufficient for the task.

## *Data Analysis*

*Case Study: Aaron's Portfolio*

How much can a paper portfolio really tell about a student's effort and achievement in an auditory subject such as music?

It was the first Friday evening after spring break. Three cardboard file totes of student portfolios sat, side by side, on the floor by my feet. I was exhausted and beginning to doubt the entire thesis of my research. I pulled out the first portfolio from the front tote. It was Aaron's! Portfolios were filed alphabetically by first name so students could easily locate their own. Of course, Aaron's would be first. Maybe this wasn't such a good place to start. Aaron had been a thorn in my side since he was in

kindergarten. Self-appointed class clown, goof-off, lazy, and disrespectful, I had never seen a glimmer of interest in music from that boy. I opened the cover and thumbed through the pages. Ten minutes later, trying to avoid eye contact, I handed Aaron's portfolio to my husband saying, "Look through this and tell me what you think."

My husband commented as he went. To a listening test: "He got all these right, He's got a good ear." To a written scale: "Did a good job on this. So, he can at least read these notes." To rhythm flash cards and practice page: "Flash cards are right, but he missed quite a bit here. Shows he can learn." "Yeah," he concluded after perusing the entire portfolio, "he may not set the world on fire, but this kid could learn to play an instrument." (H. Redmond, personal communication, April 12, 2002)

My husband had said exactly what I was hoping to hear! Aaron's portfolio revealed, to both of us, a part of Aaron that had never, in six years, shown up in music class. Without expending an undue amount of effort, Aaron had done precisely as I had requested on all portfolio assignments and, in several instances, had gone slightly beyond the minimum. Because of the music portfolio, my opinion of Aaron will never be the same as it was.

*Portfolios*

Each fifth grade music portfolio contains at least ten different entries (see Appendix F), each relating in some way to a specific district music EALR and representing in some way my mission as an elementary music specialist. Portfolio entries, their related activities, and examples of student responses are listed as follows:

(1) A listening map designed by Macmillan/McGraw-Hill publishers which corresponds to "Variations on 'Simple Gifts'" by Aaron Copeland assesses EALR 6. Students learned to sing the song, "Simple Gifts," then listened to Copeland's "Variations" while following the listening map in their student books (see Appendix G). On the portfolio day, students colored, or otherwise made special, the parts on their own listening map which represented their favorite sections of the music. Besides familiarizing students with the musical form of theme and variations, this activity also provided one of many opportunities for students to decide what instrument sounds they preferred. These fifth graders may begin to play a band instrument in middle school next year, and some of them are already learning to play stringed instruments as part of our district's fifth grade orchestra program. I have come to believe that instrumental students who love the tone of their chosen instrument will practice more and have a greater chance of succeeding on that instrument. Success, in any area, increases the likelihood of more successes. This ties in with part one of my mission as a music teacher. I'm looking toward my students' futures.

One student explained her choice of the fourth variation as her favorite in this way: "I think Variation four was the best because it was really easy to understand and I liked the instruments they used in it" (Kimberly, personal communication, April 24, 2002).

(2) Two recorder song checklists are included in the portfolio. One lists seven songs presented in December, and the other lists six songs learned in April (see Appendix H). The December recorder songs were not notated on the staff, but note names were given for students to follow. The April songs were fully notated on the staff. These portfolio entries relate to EALRs 1, 2, 3, 5 and 10. Accomplishing any one of these songs represents the total application of all the skills involved in playing a musical instrument and, in the case of the April songs, reading music as well. Since playing a musical instrument from notation is the epitome of pure music teaching, any accomplishment my students make in this area pleases the musician in me. There is also some research which suggests learning to read music and playing a musical instrument strengthens brain activity in ways which will benefit other academic

learning (Rauscher, 1995). So I feel doubly justified in asking students to perform this difficult task even when they don't intend to play an instrument in the future.

Here, one student explained the evolution of his note reading skill over the year:

> In the beginning it was easier (to follow the) lettering because you know where the letters are and you know which holes to cover. Once you got to just the notes and no letters it gets harder 'cause you don't know where it is on the treble clef lines. Well, now it's kind of easy because we practice alot. (Tan, personal communication, April 15, 2002)

(3) A music vocabulary definition page assesses EALRs 2, 4 and 5 (see Appendix I). Assessing a music EALR with a traditional language arts activity connects and supports learning across curricular areas. In class, we discussed definitions for eight basic musical terms connected to the fifth grade EALRs: syncopation, legato, staccato, descant, solo, duet, trio and quartet. Then I encouraged the students to draw from their unique experiences with music to fill up the other four lines on the page. This attempt to individualize part of the portfolio and connect school to their personal lives and prior learnings worked well for some.

This student added definitions of the basic orchestral instrument families, something she learned in music class the previous year, to complete her vocabulary page:

> String family = A group of instruments using strings to make music.
> Brass family = A group of instruments that you buzz in to make music.
> Woodwind family = A group of instruments that you blow in to make music.
>
> (Heidi, portfolio entry, February, 2002))

(4) Rhythm flash cards designed by the student with a corresponding practice page (see Appendix J) assess EALRs 1 and 2. Prior knowledge for this activity includes understanding specific note and rest values and rhythm patterns and the role of meter in music. These rhythm concepts reinforce math concepts of fraction and ratio in physical and auditory ways. A follow-up activity to making these rhythm cards is clapping various combinations of student generated flash cards as a class. Reading such student-generated script is thought to be beneficial for marginalized student populations, such as ESL and at risk students (Duke, 2000).

This is the way one student explained why she chose specific rhythms from her practice page to include on her flash cards:

> We did 2/4s, 3/4s and 4/4s and I picked that one (rhythm using eighth and quarter notes) because I didn't like that one (rhythm using only half note) because it was just one thing. I like these (eighth notes) because they're fast. (Chelsea, personal communication, April 24, 2002)

(5) A listening test (see Appendix K) evaluates EALR 7. Students must first be familiar with orchestral instruments and the four basic categories in which they are traditionally grouped and have had opportunities to listen and identify these instruments by sound. This EALR, again, speaks to possible instrument choice students may make for future learning. However, this knowledge will also make future non-musicians into better educated concert attendees.

The students did very well identifying instrument families from their sounds. The string and percussion families seemed to be the easiest to hear for most students, however, as indicated in this exchange:

Mrs. Redmond: "Which instrument family's sound is the most obvious to you?"
James: "Probably the percussion, because it has a whole bunch of different sounds."
(personal communication, April 18, 2002)

(6) In response to EALR 3, students wrote a C scale on staff paper, then practiced it on their recorders before being tested. Writing notes on a staff further reinforces concepts necessary for reading music. Benefits from reading self generated script were mentioned earlier. An example of a c scale written by one student can be found as Appendix L.

(7) A page with Kodally hand signs for the steps of a major scale (see Appendix M) served as a practice page for singing and signing a scale, both parts of EALR 3. The same portfolio page also served as a rubric for assessing student performances as they sang their scales. Much music of our culture is based on the major scale. The ability to accurately sing a scale will enhance anyone's chances of singing well.

Good singing is enjoyed and admired by many fifth graders at Volcano View Elementary as this interview excerpt attests: "I liked the singing. I really enjoyed it, actually" (Shannon, personal communication, April 18, 2002).

(8) Public performances in our school district are addressed by EALR 9. Two portfolio entries relate to this EALR. One is the printed program from this year's *Fifth Grade Program, A Winter Variety Show* (see Appendix N and O). The other is a paragraph which each student wrote to describe the program, their special part in it, their favorite part of it and so forth. Public presentations represent multiple facets of my mission as a teacher. Reasoning that my student population will possess a variety of talents, I strive to include different arts aspects into each performance in hopes of featuring any student who wants a special part. Self-esteem grows as a result of public success, and no conscientious music teacher will allow their students to fail in a performance situation. The student written paragraph serves to remind each student about his or her contribution and success.

This interview excerpt (see Appendix P) reveals how much students enjoy participating in these programs.

Mrs. Redmond: "Do you want to say anything else about our program?"
James: "I hope we can do another one before the end of the school year." (personal communication, April 18, 2002)

(9) Proper concert behavior is an important skill for the population at Volcano View Elementary to learn. Each year the fifth grade takes a field trip to a local symphony concert. Afterwards students assess their own behavior and that of a friend on an audience skills rubric (see Appendix Q). This rubric addresses EALR 8 and becomes part of each student's portfolio. At the bottom of the rubric, students are asked to represent, in any appropriate form, something from the concert that impressed them. Most students accomplish this by writing a sentence or two, while others draw a picture. This gives students a chance to reflect on the music they heard during the concert as well as how they behaved while they were there. Wrote one: "The best part of the symphony was when they played the first song on trains" (Tara, portfolio entry, October, 2001).

(10) Something new I tried this year, in an attempt to incorporate more than one art into a project, was a student composed cinquain poem about a stringed instrument, in a student-created artistic border (see Appendices R-W). This entry relates to EALR 7. I originally intended to assess all instrument families in this manner, but time constraints prevented that. The results, however, were

breathtaking! This particular portfolio entry allowed me to glimpse into the artistic heart of each of my fifth grade students and told me things I could not have learned in any other way. The following entry alone could become the basis for its own research study:

The string family
Peaceful, soothing
Splash, waterfall, avalanche!
Splish, splash, a fish is jumping.
A baby's laugh

(Lexi, portfolio entry, September, 2001)

*Documents Analysis*

To determine whether students' portfolios showed me more about their musical abilities and accomplishments than I could judge from classroom observations, I examined each portfolio separately. I briefly noted what was included and the level of competence demonstrated. Sometimes I included quotes from student's entries. Then I analyzed what I had just seen and read, recording my impressions in two or three sentences.

Portfolios fell into four separate categories: some portfolios presented a more positive impression of a student's musical accomplishments than I had deduced from classroom observations; others presented a more negative impression than classroom observations afforded; a third group confirmed, but embellished, my impressions of the student's abilities based on classroom observations, providing deeper knowledge of a student's musicianship; and the final group told me no more or less than I already knew. The first three of these categories indicate more information about students than I gathered by classroom observation. Only the last category indicates no additional information on which to assess a student. Here are some examples from my documents summary, one representing each of these four categories of information.

*Category*. Shows more than observation, positive
*Aaron.* All pages present. Two recorder songs noted on each recorder page. Standard music vocabulary. Syncopation and dotted quarter note combined on to one 4/4 card. Written scale complete, correct and legible with no erasures. Program evaluation paragraph humorous ("the people who watched were bored"). Good behavior noted on audience skills rubric. Simple but attractive border on cinquain poem. Final word of poem is "cool!"
*My analysis*. Aaron did a good job on his portfolio. He put forth minimal effort but still did quality work. He obviously likes to have a good time and doesn't want to tax himself, but his work shows me he doesn't really hate music class as he would have liked me to believe in the past.

*Category*. Shows more than observation, negative
*Larry.* Needs to play an April recorder solo! Scribbled on portfolio cover. Some rhythm cards incorrect, others missing, all sloppy. Half sung scale correct, the rest not. One recorder song accomplished in December. Standard vocabulary. Written scale OK.
*My analysis*. Larry puts forth less than minimal effort in music. I think I'll make him do some of his portfolio entries over again with Marci after this research is done. I may put his feet to the flame with singing and playing the recorder too. He's capable of doing more than I'm seeing. His written portfolio pointed that out.

*Category*. Shows more than observation, enriches

*Brianna.* All pages present. Wrote scale twice. Three paragraphs about Christmas program. Impeccable handwriting. PERFECT cinquain poem AND border! ALL recorder songs mastered in December, played one of the hardest in April. One puzzle included.

*My analysis*. Brianna is an amazing overachiever! She is so quiet she might be overlooked in class. Her musical ability and artistic ability may compete for her elective time in high school. If she doesn't take band next year, it will be a waste.

*Category*. Doesn't show more than observation

*Nate.* Needs to play an April recorder solo! 12 vocabulary words. Two recorder songs in December. The rest is complete and correct. Poem quite good, border quite artistic.

*My analysis*. Nate is a shy, quiet kid and I really don't know much about his musical ability and potential. This is his second year at our school. He is able to blend in and not be noticed (by choice? - I think so.) His written portfolio doesn't reveal any more than his class behavior does.

*Documents Findings*

The documents analysis data speaks strongly in favor of portfolios shedding more light on student learning than classroom observations alone. I learned more about student achievement in 80% of the portfolios studied, whereas 20% of the portfolios revealed no more than I knew from classroom observation alone. The 80% increased information breaks down in this way: 48 % of the portfolios validated and enriched my assessment of individual student achievement; 35% of the portfolios showed more positive results than I expected, that is to say 35% of the students were actually achieving at a higher level than I assumed; and 17% showed more negative results. In other words, portfolios showed 17% of the students were achieving at a lower level than I thought. All this is all valuable information to a teacher who only sees her students one hour and twenty minutes a week!

*Assertion 1*

By studying fifth grade music portfolios, the music teacher at Volcano View Elementary gained a deeper understanding of each student's musical knowledge, preferences, enthusiasm, and effort than was possible from merely observing class behavior.

To summarize what has been learned, so far this research indicates that studying student portfolios and adding that information to anecdotal and documented classroom observations produces a significant body of information about fifth graders musical knowledge and abilities. The majority of students studied seem to be trying to accomplish the stated EALRs and, to some degree, enjoying themselves in the process. For some students, music ability appears to be a strength and may be the key to their success in other academic areas. I will next examine results from the other methods of data collection to determine more precisely the nature of student learning in fifth grade music classes at Volcano View.

*Interviews*

I interviewed eight students and, just like in the Matthew Miltch quote below, delightful surprises happened in every case.

[I] questioned each learner individually, each examination becoming a private conversation about what we'd (learned), each

conscientious learner telling me more about her or his learning than I'd ever discovered in written exams. (2002).

I refer to my interviews with fifth graders about their portfolios as exit interviews because the interview protocol was designed as a summation of the portfolio itself. I told the students I wanted to discuss their portfolios with them over lunch, since lunchtime was the only time fifth graders and I had a break at the same time. We discussed each portfolio entry in order, sticking with the questions on the interview protocol. All interviews were tape recorded and transcribed later.

*Brad and Laura: Documents appear more positive than observations*. I interviewed Brad and Laura because the documents analysis of their portfolios presented a more positive picture of their musical accomplishments and abilities than class observations had indicated, and I wanted to find out why.

Brad attended Volcano View Elementary since he was in kindergarten, and Laura came in the third grade. In years past, both students have demanded more than their share of teacher time in music class. Brad's behavior was extremely challenging in the early grades, and Laura has traditionally whined and insisted on personal attention at inappropriate times. Both students were more passive this year. While this could be interpreted as improvement, it could also indicate withdrawal or lack of interest. It troubled me that neither of these students, who previously craved attention, volunteered for a special part in the fifth grade program. Laura has considerable musical talent and could have done many special parts well, and Brad also has abilities which could have been featured. However, I found both students' portfolios to be carefully put together, honest, correct, and including unique adaptations to some of the entries. A sense of pride in accomplishment came across through their written pages. The interviews confirmed that pride, showed considerable musical knowledge, and revealed a newfound contentment I had not seen in these two before.

The first impressive thing about Brad's portfolio was how neatly everything was put in order. When I complimented him on that, he sat up straight and stated matter-of-factly but with a grin, "Every work I do, I put it on top of everything else" (personal communication, April 23, 2002). That step-by-step approach seemed to be working for Brad. Apparently, this year, he learned the value of persistent trying, the concept of practicing. Several times, he mentioned a skill (e.g., drawing a treble clef, singing the scale, learning a song on recorder, getting 100% on the listening test) that he perfected through repeated trial and error. "I just tried, and fixed it, and tried again" (personal communication, April 23, 2002). Brad's interview confirmed the positive picture his portfolio conveyed. I concluded his compliance in music class indicated a desire to cooperate that wasn't part of Brad before this year.

Laura's interview revealed how much she loves music! Music was her favorite school subject. She created her own music homework by listening to CDs which were unfamiliar to her and identifying the instruments she heard playing. She had recently begun taking piano lessons. Laura, too, understood the value of practice in music learning. In her interview, she discussed listening practice, piano practice, and rhythm clapping practice, and she thought her sung scale was improving because, "I've been practicing a little more on it than I used to" (personal communication, April 16, 2002). Laura's interview also confirmed the positive impression given by her portfolio. When asked about her quiet ways this year, she revealed a reserved nature which I didn't previously know about. "Usually, If I'm embarrassed about stuff, I don't want to sign up until I have enough time to think about it, and see how it's going to work out" (personal communication, April 16, 2002). It turned out that Laura was choosy about her commitments, but confidence and attitude were not issues.

*James and Tan: Documents appear more negative than observations*. James and Tan's classroom behaviors appeared much more positive than their portfolio entries showed. They were interviewed so that I could figure out what was happening.

In their music classes, James and Tan are natural leaders. James's lusty singing inspires others to join in and not hold back. He is characteristically first to volunteer for any music activity whether it be playing a recorder solo, clapping a rhythm or dancing with a girl. His classmates look to him for leadership. In the taped portfolio activities, James's confident voice was always the one others chose to announce any group activities. Likewise, in his music class, Tan was also the one chosen to represent his peers. Tan had a quieter style than James, but was no less enthusiastic or popular. This year, Tan was very enthusiastically learning to play the violin. He organized a small ensemble of fifth-grade string players whose goal was to perform for every class of younger students at Volcano View Elementary at least once and fourth graders at least twice so "they will get excited about taking orchestra next year" (personal communication, April 15, 2002).

James's and Tan's portfolios, however, don't look like the work of enthusiastic overachievers. In my documents summary, I noted, "Nothing very outstanding in James' portfolio. He did quality work . . . and was very honest about his accomplishments. . . . His written scale reveals he still reverses letters occasionally, catches himself, erases and fixes it" (documents summary, April 13, 2002). Tan's portfolio is neat, correct, and attractive, but minimal. If his portfolio belonged to another student who was less visible on the Volcano View Elementary music scene, it would probably be counted as good but, for Tan, I found it disappointing.

These boys' interviews supported my positive opinions of their musicianship based on class observations, not their portfolio's more negative impressions. James's interview revealed a sophisticated understanding and love for sounds. In our discussion of the symphony concert field trip, he said his favorite instrument was the oboe, a strange choice for a ten-year-old boy. His reason was, "I don't know. It just sounded pretty cool" (personal communication, April 18, 2002). His conversation convinced me he could easily distinguish various instruments' sounds while listening to a full orchestra as well as picking out stylistic aspects of the music. When asked if he thought he could recognize the styles represented by our music vocabulary words if he heard them being used by a performing group in a concert, he answered reflectively:

> Some of it. Not all. Legato and stacatto. Some descant parts, and syncopation. The most difficult to recognize would be legato, 'cause it's smooth. It would be hard. (personal communication, April 18, 2002)

James expressed a preference for reading notes instead of letter names for notes. He also indicated an understanding of the need to practice to improve in music. In this interview situation, James was calm and reflective, unlike the buoyant personality he shows around his friends.

Tan's interview revealed him to be a quiet, confident young musician. Tan went to orchestra class every morning, music class twice an week, and practiced violin every day. He understood musical concepts other fifth graders do not. Our discussion about playing the C scale on the recorder went like this:

> Tan: "The thing I don't like about it is the C. It's way down there, and I'm not used to doing things with my pinky. I like the rest of it but I don't like the C."
> Mrs. Redmond, jokingly: "So, if it was a D scale, it would be better?"
> Tan, laughing: "Yeah, it would be better!"
>
> (personal communication, April 15, 2002)

Most fifth graders at Volcano View don't realize there is any other scale besides C, and wouldn't have understood my joke.

Tan applied learnings from music class to orchestra and vice versa. He was not embarrassed to admit when he was confused by a concept and was confident that, with repeated exposure, he would eventually understand everything he needed to know.

Why did James's and Tan's portfolios present a lesser impression of their musicianship than was obvious from observations? I speculate that, in these two cases, the written words got in the way. In the past, James has had had extreme difficulty with reading. The carefully corrected reversals on his written scale indicated he still had some perceptual problems. It is likely that written responses would not present James's intellect in the best light. In Tan's case, language was also a consideration. Although English is spoken in his home, his parents are Vietnamese immigrants. Tan's written responses seemed guarded. It appeared to be important to Tan that he have everything precisely correct, which may have prevented him from taking risks with his written work. James and Tan were two examples of students for whom music may be a key subject for unlocking the other academic areas.

*Interview Findings*

Examination of the other four interviews conducted reiterates what these interviews indicate, and, as a result, some important learning trends among my students have become clear. The interviews point out that students at Volcano View understand the important role practice plays in mastering music. Many of them are well on their way to learning to play an instrument by following notation, and actually prefer reading notation to reading note names. Also, discriminative music listening skills among fifth graders are at a higher level than I thought.

As far as whether to trust classroom observations or portfolio results, these interviews indicate that the most positive assessment is the one that should be believed. One reason for using portfolios in music was to provide for individual differences among learners. The next step in teaching was to expect that those differences would appear and be replaced by correct interpretations of children's actual abilities. Students should be provided many different opportunities to demonstrate what they know, and not penalized if they are unable to demonstrate that knowledge in every way.

From the teaching and learning strand of this research, I found the interview itself to be a superior method for discovering what students have learned about music and, often, many other important things. Interviewing students is very time-consuming, but the specific knowledge gained was unmatched.

One interviewee was Damian, a tiny fifth-grade boy who was thought of as a low achiever by students and teachers alike. I learned in his interview that he actually knew more than the seemingly more capable student I had trusted to help me correct students' work in class one day.

Mrs. Redmond: "It looks like your rhythm cards and practice page are all correct."
Damian: "Yeah, they're all right."
Mrs. Redmond: "Was that hard or easy?"
Damian: "Easy! Besides the three. Because I used the most easiest three [shows rhythm card with dotted half note]. But then, [with] the other three, I tried a whole bunch of different things and . . . I don't know much about three. See, I thought that was a three [points to his practice page]."
Mrs. Redmond: "It is! Three quarter notes."

Damian: "No, not that. On the place below [points to where he erased and wrote over]."
Mrs. Redmond: "Oh, you thought that . . . but, you know what, Damian? That looks like four eighth notes plus a quarter note."
Damian: "Yeah."
Mrs. Redmond: "That's three!"
Damian "But, the correcting guy that day said it wasn't."
Mrs. Redmond: "Who was the correcting guy?"
Damian: "I don't know. I think it was – it was Ron!"
Mrs. Redmond: "It was Ron? Well, I hate to tell you, but Ron was wrong. You were right!"
Damian: "Oh, thank you!"
Mrs. Redmond: "Yeah. So, you know a lot about three!"

(personal communication, April 18, 2002)

Damian's interview concluded with him playing another recorder song he had prepared at home. I learned more about his music abilities during that half-hour discussion than I had in the two years he had been in my classes.

*Assertion 2*

Teacher interviews of students about portfolio contents provided superior understanding of individual student achievement, and was, therefore, an ideal assessment method as well as a teaching and learning tool.

*Survey*

I'm interested in YOUR OPINIONS about YOUR music portfolio. Please answer these questions. It is not OK to answer ALL or NONE – you must mention a particular portfolio entry for each question.

(survey introduction, this study)

Eventually, learners need to take responsibility for their own learning. At the end of fifth grade in music classes in my district, that time has come. In the month of May at Volcano View Elementary, fifth-graders choose their sixth-grade music option. For the next few years of their schooling, it will not be possible for students to take public school classes in both singing and instrument playing. I often feel my students and their parents take this decision too lightly. I strongly disagree with that attitude. I believe participation in music provides untold benefits which last a lifetime. A pattern persists whereby, once a person leaves music activities, it becomes difficult to rejoin. And fifth-graders at Volcano View are very ready to take the next step in their music educations.

The survey portion of this study was designed to force each fifth-grader to think about personal strengths, weaknesses, likes and dislikes in music. Student awareness was the major goal, teacher information was of secondary importance. The introductory paragraph written above was designed as a focus for students. I wanted them to take the questions seriously, do their own thinking, consider all parts of their music learning, and know that I truly valued their opinions. The variety and honesty of their answers indicated they did:

*Question 7: How well do you think you play the recorder?*
"I think I'm in the OK section." (Shannon)

"Not too good, but with friends I do better." (Lexi)
"Extremely good!" (Tom)
"I think I need some practice." (Mara)

*Question 8: Do you enjoy singing descants?*
"I like to when people want me to." (Jeremy)
"No, not really." (Evan)
"Yes, it is my favorite part of singing." (Brian)
"I love descants, they light up my soul!" (Amber)

(student survey responses, April 22-23, 2002)

The ten questions of the survey asked students to identify portfolio entries which were difficult, easy and fun for them, and also which entries they were proud of and they considered their best effort. A specific question about the scale asked whether singing, playing, doing hand signs, or writing the scale was easier. Other questions requested student opinions concerning playing the recorder, singing descants, the sounds of various instruments, and their music choice for sixth grade. I wondered whether students' music elective choices would reflect their interests and abilities or not.

*Survey Results*

Results from each survey question were graphed and analyzed. Results are as follows:

*Question 1. Which portfolio entry was MOST DIFFICULT for you*? Analysis: The most difficult entry for these students was doing the scale in hand signs (see Appendix M). This is not surprising because I have not done much singing with hand signs over the years with this group, so the skill is unfamiliar. It has not been practiced enough.

Music vocabulary and rhythm cards were equally difficult for this group and only slightly less difficult than the hand sign scale. I found this interesting because vocabulary aligns with language arts concepts and rhythm aligns with math concepts. Possibly an equal number of these students have difficulties with language arts and math. This supports the need to use a variety of teaching methods so as to reach the maximum number of diverse learners.

The cinquain poem and April recorder songs were difficult for significant numbers of these students. Both those portfolio entries represented complex sets of skills which might be considered difficult by any group of learners, adults or children.

*Question 2: Which portfolio entry was EASIEST for you*? Analysis: Rhythm cards was listed as the easiest portfolio entry for most students on the survey. Music vocabulary was also significantly easy for many. The fact that these two entries were also listed as hardest by a significant number of students indicates the students taking this survey were truly stating their own opinions, as I requested, and different topics are easy and difficult for different learners.

The theme and variations page and the listening test also rated as significantly easy for this group. Both of those entries involved discriminative listening to orchestral music. My observation that students at Volcano View have elevated listening skills is upheld by this.

April recorder songs, which involved music reading skills as well as ability to play recorder, rated higher on the easy entry page than it did on the difficult entry page. This supports the idea that a significant number of fifth grade students at Volcano View are well on their way to becoming competent instrumentalists.

*Question 3: Which portfolio entry are you MOST PROUD OF*? Analysis: Overwhelmingly, fifth grade students at Volcano View were proud of the cinquain poems with original artistic borders. I have to agree with them. The finished products are outstanding and much effort went into them. They should be proud. The poems represent students' attempts to originally describe something complex and beautiful, the sound of string instruments. The borders are individual artistic reactions to their words and the music. I believe students appreciated the opportunity and challenge of expressing themselves in free forms and unique media.

The next three significant pride-evoking entries were the April recorder songs, rhythm cards, and the winter program. Activities connected with these three all involved challenge and attaining a new level of skill in some area. These fifth graders, clearly, took pride in their learning.

*Question 4: Which portfolio entry was MOST FUN to do*? Analysis: Apparently fifth graders at Volcano View Elementary enjoy a challenge because three of the same challenging entries which gave them pride, on the last page (i.e., cinquain poem, rhythm cards and April recorder songs) also placed highest in their fun-to-do category. Music vocabulary, theme and variations, winter program, and hand sign scale (singing the scale was included with this entry since the two were done together) were also rated as fun. Each of those activities presented a challenge of its own.

*Question 5: Which portfolio entry is your BEST one*? Analysis: I told students to define the word "best" in their own ways. I emphasized that all people had different needs, wants, tastes, and standards. Their personal definitions of what they considered to be the best was all that mattered here. Given this ipsative perspective, perhaps this graph cannot be interpreted. A few things do come to mind, however.

The cinquain poem, again, comes out on top, whatever the students used as their standards. Rhythm cards, a culminating activity of skills these students have been incrementally learning in music class since they were in first grade, placed second. This may indicate a sense of pride or accomplishment at seeing the amount of growth they have achieved in that one area. The rest of the responses are liberally distributed all over the chart. Perhaps this indicates that the respondents simply answered honestly, from their various perspectives.

*The unique case of the cinquain poem*. Survey responses for the first three items were overwhelmingly dominated by the cinquain poem. This high level of response to only one portfolio entry raises questions. First, I wonder if the rest of the responses to the first three survey items are invalid because the popular entry skewed the results. Possibly that is true, but what I chose to do instead was to accept the favorable response to the poem as an entity to itself, then deal with the other responses as a unit.

Second, I wonder why the cinquain poem and artistic border were so hugely popular with students. In interview, James mentioned how he composed his poem as a partner project with a friend who had since moved away; reading the poem reminded him of that friend. Damian remarked that he enjoyed making a zig-zag design on the border of his poem. Neasha described the pleasure she derived from the colors she chose for her border and background, colors that made her happy and that she recently wearing every day as a personal signature. Tracey liked the line, "relaxing, graceful, depressed," which she had written to describe various moods

violin music can evoke. Laura agreed, and went on to describe how similar emotions could be felt from other musical selections we had heard in class. In the presentations, Tara and others appreciated the opportunity to express their feelings through the poem.

Analysis: Emotion is the factor connecting all the student remarks concerning the poem entry. It feels good to work on a project with a friend, to watch your hand create interesting shapes on paper, to manipulate color combinations, to choose words which precisely reflect what you feel. The arts provide this conduit for expressing emotion in creative, socially acceptable, identity-revealing ways. Volcano View students exuberantly embraced the cinquain poem project in September and, when they filled out their surveys in April, survey results showed their high level of enthusiasm remained. I did not expect these results, and in no way did my teaching, consciously or unconsciously, serve to manipulate them. To me, this data expresses a strong statement from students at Volcano View Elementary that something very important is missing from their education.

*Assertion 3*

Fifth grade students at Volcano View Elementary needed, but rarely received, integrated arts learning experiences due to the school's present test-oriented focus.

The next group of questions was designed to focus student's thinking on their unique strengths, weaknesses and preferences concerning music, with an eye toward making an informed choice for their sixth grade music option.

*Question 6: What parts of the scale were easiest for you*? Analysis: A significant majority of students found it easier to sing or play a scale on the recorder than to write or hand sign a scale. This is good, since performing by singing or playing an instrument is more true to the nature of music than writing or making hand gestures. It is reasonable to assume that those who found it easier to sing the scale might experience the most success in sixth grade chorus and those who were more successful at playing the scale might adapt better to sixth grade orchestra or band.

*Question 7: How well do you think you play the recorder*? Analysis: Students' opinions of their own recorder playing may have reflected their confidence level as much as actual playing ability. Responses fall into a bell curve shape skewed to the positive end, indicating that the majority of students believe they can succeed in the endeavor of playing a musical instrument. This is an important attitude for beginning band and orchestra students.

*Question 8: Do you enjoy singing descants*? Analysis: Descants are high harmony parts that sound beautiful when sung over a strong melody. These fifth graders sang descants all year. Survey results show the popularity of descants with this group, except for a minority. Descant singing and similar activities will definitely occur in sixth grade chorus classes, so those who dislike descants should strongly consider learning to play an instrument.

*Question 9: Which instrument family do you think sounds the best*? Analysis: These results relate directly back to the practice theory. This class has listened to string music more than the other three families combined this year. The cinquain poem activities were accompanied by string music so students could form a concept of the sound they were poetically describing. Volcano View's active orchestra students have performed for their classmates on multiple occasions. Over twenty percent of the class belongs to that orchestra group. Interviewees overwhelmingly stated that string and percussion sounds were the easiest to distinguish when a full orchestra was playing. Sounds most heard become easily recognized and familiar sounds seem preferred.

*Question 10: Which music class are you planning to take in sixth grade*? Analysis: I did not expect an even and sensible distribution. Many of these students' families have no music tradition established. Parents who played in band or orchestra themselves are more likely to encourage their children to also play an instrument. Also, beginning band and orchestra requires a commitment to practice on the part of the student as well as a financial commitment on the part of the parent. Those are both deterrents for many of my students. However, the fifth grade orchestra and recorder playing experiences these students have had may have helped them balance the picture. Also, I feel, the focused listening activities involved with many portfolio entries have helped these students more clearly define the benefits of playing an instrument. Volcano View will be well represented in all three sixth grade music options. Fifth graders appear to be applying what they have learned in music class to their future music choices.

*Assertion 4*

> Music portfolios helped fifth grade students at Volcano View Elementary mentally organize and remember what they'd learned about music, thus enabling them to better understand their musical strengths. That knowledge facilitated more informed decisions concerning their musical futures.

*Mini-Study: Public Presentation of Portfolios*

> Sam spoke confidently about each card. He made a good connection between the note value and the measure time on each card. Also, his understanding of the concept allowed him to prove that each card was an accurate representation of the principle incorporated into the lesson. (M. Bryant, presentation report, April 15, 2002)

Although I encourage my students to share their music portfolios with their parents at the end of the year, I don't believe many of them actually follow through. Since one of my reasons for using music portfolios from the onset was to inform others about the important learning which occurs in music class, I considered using public presentation of portfolios since the beginning. It seemed appropriate, therefore, to include some facet of portfolio presentation as part of this study. Portfolio presentation, however, accomplishes much more than good public relations. One time-honored educational concept is that having a student teach what they have learned requires that they truly understand it. Explaining part of the music portfolio to others could accomplish that purpose.

> Mike definitely understands what theme and variations are about and could apply it to other musical works. (H. Redmond, presentation report, April 24, 2002)

Public presentation of portfolios is not new. Portfolio nights, where students explain learnings from their portfolios to an audience, have been used in many places at many levels. At Emily Dickinson Elementary School in Redmond, Washington, literacy portfolios are shared with "students, parents, the school board, and the community, in effect, offering the school's many audiences opportunity to assess student achievement" (Mabry, 1999, p. 117).

This research didn't attempt anything so complex. For this study, feasibility of presentations was paramount. Presentations were restricted to the students' regular music class times and students presented to volunteers, Marci Bryant and Mr. Redmond. Each of the thirty-one presentations took between one and ten minutes to complete. Students were not trained in how or what to present; they simply chose a portfolio entry and explained it to the volunteer. Marci immediately typed up a summary of the presentation and her impression of the presenter's effort and achievement. Mr. Redmond tape-recorded the presentations and briefly discussed the

portfolio entry with each presenter. The recorded presentations were slightly longer than the others, and they were not transcribed literally.

Overwhelmingly, the presentations were impressive. In most cases, students chose entries which cast a positive light on their musical knowledge. Most seemed to accurately represent the music concepts involved. Several students volunteered information about the purpose of their music portfolios.

> Sharon began by explaining that the music portfolios are used to keep track of their accomplishments in music. (M. Bryant, presentation report, April 18 2002)

One enthusiastic presenter presented two entries and would have kept going if the volunteer hadn't stopped her. A variety of entries were chosen by the students, and all EALRs were covered over the course of the thirty-one presentations. The presentation portion of this study was easy to accomplish, and the results were rewarding.

Because of this study, I will definitely add some form of public portfolio presentation into my teaching in the future, not only with fifth graders but with younger students as well. The exact form the presentations will take will undoubtedly vary from year to year. One possibility would be to link portfolio presentations with public performances since the audience would already be present. There are some areas for concern, however. A few of the presentations misrepresented what had been taught.

> Dan understood the concept of a scale, but couldn't execute it correctly. (H. Redmond, presentation report, April 24, 2002)

Obvious errors in the presentations won't leave a very good public impression. Hopefully, most of those can be taken care of with some extra training in presentation choice and technique. I must conclude that portfolio presentation is worthwhile but not risk free.

*Assertion 5*

> Presentation of music portfolio contents to a third party was effective as an alternative form of authentic assessment and suggested positive public relations tool and a further opportunity for student understanding.

*Mini-Study: Taped Portfolios*

> If the specifics of what will be taught are known, it is a relatively simple matter to determine the most appropriate methods for assessing the learning. The assessment must be congruent with the actual learning targets. If band students are taught how to play the B flat concert scale, they should not be assessed on their ability to notate the B flat concert scale. (Asmus, 1999)

Edward Asmus articulates a worry which has nagged at my conscience since the beginning of my music portfolio experimentation in the early 1990s. My district's music philosophy, which I was instrumental in honing, is that elementary music education should be active, experiential, and hands-on. Building on children's natural tendency to learn by doing, my colleagues and I pledged to teach our students to sing and play instruments accurately by singing and playing instruments. In that case, isn't a paper portfolio incongruous with the task? Wouldn't a taped portfolio be the appropriate assessment tool?

At higher levels of schooling, particularly middle and high school band and college education classes, audio portfolios of various types are increasingly being used. Many college education departments are requiring that all students maintain electronic portfolios. These have been described as "extensive resume(s) that link to an electronic repository of a student's papers, problem sets, . . . and anything else that demonstrates the student's accomplishments and activities" (Young, 2002). In the state of Washington, Pacific Lutheran University and the University of Washington are using such e-portfolios in limited ways. College students with e-portfolios can download their information onto CD-ROMS for use in job interviews, graduate school applications, or to prove that their parents' money wasn't wasted.

In secondary level music classes, audio-taped student performances have been used as a means of auditioning students for special performing groups for decades. Across the nation, music departments and individual teachers are taking this method one step further by using such tapes as student assessment tools. Band students in Carroll, Iowa, assess their own taped solo performances beginning in the fifth grade. Students tape themselves playing a musical selection, then listen and evaluate the performance with the help of a rubric. Initially, teachers guide the evaluation process and provide input but, as students progress through the music program, the number of taped evaluations increases and teacher input decreases. The ultimate goal is to make students responsible for their own learning (Burrack, 2002). Thomas Goolsby (1995) documented examples of several music teachers in the Seattle area who were experimenting with "formative evaluation through portfolio-type assessment" using cassette tapes. Goolsby noted that an entire school district, the Federal Way School District, was piloting a pre-packaged computer program of music portfolio assessment. Clearly, the precedent of taped portfolio use in public school situations has been set.

I limited the scope of this taped portfolio study by reducing the number of entries and participants. Twelve student volunteers, whom classroom teachers had identified as a representative sample of the fifth grade at Volcano View in terms of reading ability and socioeconomic status, were enlisted in the project. These students were invited to attend three after school taping sessions. Parental permission was obtained. Lesson plans were made for each of the sessions, and some taping and listening equipment was purchased. EALRs to be measured at the sessions were: singing and playing scales at session one, demonstrating legato and stacatto at session two, and performing combined student composed rhythm cards at session three. A few exit questions for students to answer were designed to help with assessment of the project.

The plan was for students to gather together at the beginning of each session to review the assignment, then break into small groups to practice. Each individual or group would then tape the assignment and listen at different stations. After that, students would answer the exit questions and leave. I allowed thirty minutes for each tape portfolio session.

> This was a crazy time! An accidental fire alarm happened at the beginning of the session, and all after-school activities had to go outside until the fire department gave the OK to go back in. That made everything late. It was sunny and warm, so students were feeling frisky. It was the last day of some other after school activities, many. involving public presentations starting at 3:40 (when we were supposed to be done.) Nikki, James, and Steven got called out of our activity over the intercom because of this. Many other intercom interruptions made taping difficult. In spite of all this, most students said this tape portfolio session was easier than last time! (tape portfolio session two observation, March 21, 2002)

As this excerpt suggests, the taped portfolio recording sessions did not go smoothly. Students were not able to use the equipment without problems in the beginning; the noise of other students practicing made taping difficult; students were embarrassed to tape in front of others; and twelve students proved to be too many to accomplish the given tasks in the thirty minutes I had allowed.

Although many successful performances did eventually get recorded, I don't think anybody learned anything except me.

Many students were unable to recognize the quality of their performances. James thought his sung scale was more accurate than his recorder scale when the opposite was true. Angel and Amber both felt their first session tapes were more successful than their second session tape but, in reality, their second session attempts were far superior. Even worse, Dan did recognize the quality of his inferior taped scales. Dan's answers to the exit questions after session one indicated he felt he had totally failed! It took some counseling to convince him that, even though his scales weren't perfect that day, he was making progress. Many of the problems encountered with the taped portfolios would have diminished with repeated practice and refinement, but I chose terminate this portion of the study after the initial three sessions because it simply wasn't feasible to continue.

Reading articles about other attempts with taped portfolios shed some insight into why this taped portfolio study turned out to be so problematic. To begin with, the population in my study statistically represented the entire student body at my school, whereas all the taped portfolios I read about were used with select groups of students such as band students or college teacher education students. In such situations, where performing specific tasks are vital to success in a chosen activity, individuals would probably be more motivated to make the taping successful. The population in my study was also quite young compared to those of the other studies. In Carrolls, Iowa, fifth grade band students were taped, but only once during the year. Also, that taping and evaluation session was carefully guided one-on-one by the instructor with the help of a specific rubric to focus the learning (Burrack, 2002). In my study, some paper portfolio pages could have helped focus the learners as they practiced and recorded, but I didn't choose to use them that way. That was a mistake but, even if I had used rubrics, I believe other interfering factors would have still prevented the project from succeeding.

I didn't realize how distracting the noise level of the room would be to the students as they attempted to record. Often, during regular music classes, a few students will work on a project in one part of the room while the rest of the class participates in whole class music activities. Even very young students have proven able to function well under those circumstances. So, I reasoned that having only twelve of the oldest students at the school working on the same project at the same time inside the music room should be possible. My mistake: I was considering numbers of students, not numbers of separate sounds. When an entire class works together, one large sound results; when twelve students work separately, twelve smaller sounds result. The fact that all the students were working separately on the same project probably made the resulting sounds even more confusing.

The next problem I didn't foresee was student embarrassment. The student sample represented all three fifth grade classes at Volcano View. Although some of these students were acquainted through day-care, orchestra class, and other ways separate from school, that wasn't true for everyone. Individuals needed to become better acquainted before singing alone comfortably in front of each other. In retrospect, I think it would have been better if the group rhythm clapping activity from the third session had happened at the first session. Having students work in small groups on a less embarrassing activity, such as clapping rhythms, would have limited the noise level, allowed for some community building, and increased the chances of the project succeeding.

Some initial instruction about how to record and listen to the tapes also proved to be necessary. It has been my experience that students usually know more than I do about how to run electronic equipment. Therefore, on the first day, I gave very short, basic verbal directions concerning the taping process. Some students were easily able to tape and listen to themselves. Others, unfortunately, were not. A lot of time was wasted during the first session by confused students making taping mistakes. I obviously didn't plan adequately for this aspect of the study. If I ever attempt taped portfolios again, I will pre-instruct a few students to help

others learn to run the equipment.

I may not attempt actual taped portfolios again, but I will probably use individual taped performances in some way in the future because what I learn by listening to individual solo excepts cannot be duplicated by any other teaching method. Fifth-graders or their parents might also be interested in owning such a tape for sentimental reasons. Educationally, a completed taped portfolio represents a benchmark on the way to greater musical accomplishments. There may be value in those things. I found the taped entries themselves, however, to be extremely informative and useful to me for understanding individual student achievement. Some expedient combination of individual taped performance and student conference or interview might provide the ultimately beneficial assessment and teaching and learning forum.

*Assertion 6*

Tape-recordings of music performance skills provided superior assessment information for the teacher, but fifth-grade students needed guidance to make meaning from them.

## Conclusion

Jeremy described how to do a word search puzzle. When asked what the word search puzzle was about, Jeremy described the four instrument families, mentioning some individual instruments from each. He had no props for this knowledge demonstration because the word search puzzle was only about the brass instruments. Jeremy then shared how he liked to do word search puzzles, and so does his mother. She provides him with many puzzles. Jeremy, however, was able to demonstrate musical learning through this word search puzzle. In my experience as a teacher, I have never approved of such puzzles. I consider them to be busy work. This is the first time I have ever seen one that actually fulfilled an educational goal. (H. Redmond, presentation report, April 24, 2002)

If a teacher wants to give many different students the same knowledge, common sense tells us she should teach that knowledge in many different ways. Human beings are too varied and each human intellect too complex for any one-size-fits-all method to be effective as either a teaching or assessment tool. That is why I ask my music students to sing, clap, dance, draw, listen, whisper to their neighbor and, sometimes, write things down on pieces of paper. That is also why I try to listen, watch, read, discuss, and analyze before judging what my students actually know. This research has helped me define the role music portfolios can play in that process. Previously, I thought they were probably a good thing. Now I have learned that they definitely are.

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Appendix A

Volcano View music curriculum, fifth grade

Appendix B
Student assent and parent consent form

Appendix C
Interview protocol

Appendix D
Student survey

Appendix E
Parent consent form for taped mini-study

Appendix F
Portfolio entry order

Appendix G
Theme and variations listening map

Appendix H
April recorder song rubric

Appendix I

Music vocabulary template

Appendix J
Rhythm practice page, student work

Appendix K
Listening test, student work

Appendix L
Example of a c scale written by a student
(Amber, portfolio entry, January, 2002)

Appendix M
Kodally hand signs for major scale

Appendix N
Printed program for winter program

Appendix O
December recorder song rubric

Appendix P
Winter program paragraph, student work

Appendix Q
Audience skills rubric

Appendix R
Cinquain poem worksheet

Appendix S
Cinquain poem template, student work

Appendix T
Cinquain poem:  The String Family

Appendix U
Cinquain poem:  Violin

Appendix V

Cinquain poem:  Harp

Appendix W

Cinquain poem:  Bass Guitar