

# Critical Impacts for Music Education

By

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## Abstract

*What do music teachers believe are the positive impacts of music education on students and schools? What are the expert skills and knowledge needed to create those impacts? What must students learn in music classes to attain these impacts? Few studies investigate the impact of music education from the point of view of the music teacher. This paper seeks to present preliminary information from a pilot study of the Critical Impacts of Music Questionnaire. Results indicate agreement with many statements of impact from the research literature, but also suggest interesting differences between general, choral, and instrumental music teachers regarding the impacts of school music study.*

## Introduction

What do music teachers believe are the positive impacts of music education on students and schools? What are the expert skills and knowledge needed to create those impacts? What must students learn in music classes to attain these impacts? Much has been written about the impacts of music education from the point of view of the general public and of the music industry; the Mozart Effect research and studies linking SAT scores to school music participation are but two examples. Few studies, however, investigate the impact of music education from the point of view of the music teacher. This paper seeks to present preliminary information from a study designed to aid the music teacher's perspective to the discussion of impact.

## Purpose

The primary purpose of this study was to examine music teacher impressions of the impacts of music study in K-12 education. Secondary purposes of the study include a) exploring

music teacher beliefs about the music learning and teacher expertise that leads to positive impacts from music education, and b) investigating music teacher responses to descriptions of impact from the research literature.

### **Rationale and Theoretical Framework**

While research investigating the impacts of music study is plentiful, “[s]urprisingly little research exists on what teachers believe the purpose of music teaching to be” (Froehlich, 1992, p. 563). Studies investigating this topic tend to fall into one of two large categories, with one focused on artistic benefit and the other on extra-musical benefit. Recent reports of large-scale research projects in the latter area (i.e., Deasy, 2002, Fiske, 2003) seem to support the idea that connections between music instruction and academic achievement, overall school success, or reaching students “from disadvantaged circumstances” are the real impacts of arts education. Other studies refute those claims. Hetland and Winner (2001) for instance, conducted a meta analysis of research related to the extra-musical benefits of music and concluded that there was a lack of empirical evidence for most claims. Other researchers (i.e., Smith, 2001) use philosophical arguments to make the case that the value of arts instruction is found in arts based skills and knowledge.

Even studies that claim to bridge this gap may fail to do so. Burton, Horowitz and Abeles studied arts programs in 29 public schools that were nominated for the study by arts educators. Their research centered on three questions: What is arts learning? Does it extend to learning in other school subjects? What conditions in schools support this learning? Most interesting is their “unexpected outcome” that “the arts are neither ancillary nor core but rather that they are participants in the development of critical ways of thinking and learning” in arts-rich schools (p.

44). In contrast, the arts may in fact be “considered ancillary,” in schools with “a paucity of arts provision;” not only because they are not integral to the total learning function of the school but because such school environment does not enable integration to occur. This finding is important, but unfortunately offers little information about arts curricula and arts teacher expertise in “arts-rich” schools. Surveys and interviews were done entirely with non-arts teachers; the authors worked with specialist teachers in language, science and mathematics but not, apparently in the arts (p. 41).

Music teacher perceptions sometimes reflect this lack of connection. Using focus groups and interviews, Frierson-Campbell (2003) found that a group of music teachers from urban schools in New Jersey expressed a “profound conflict” between an idealized identity based on musicianship and the role expectations they perceive from other educators in their schools. The teachers’ administrators revealed in interviews that their perception of the role of music as an educational discipline was related more to the integration of music and other skills or to the overall culture of the school than to achievement in music (p. 213).

Other ‘specialist’ areas in public schools fare similarly to music. Even when the general public acknowledges their importance, most people do not use the same vocabulary that practitioners do, nor do they have the same understanding of the administrative and pedagogical requirements for achieving their greatest impact. Recognizing this fact, Todd (2003) “sought to understand how students benefit from school libraries through elaborating and measuring ‘conceptions of help’ as perceived by students and faculty (p. 1). The web-based *Impacts on Learning Survey* was administered to students in grades 3 through 12 from thirty-nine schools in Ohio that were identified as having excellent school library media programs; participating schools were chosen through a nomination process. The survey consisted of Likert responses to

48 statements of “helps” from the literature, and an open-ended *critical incident* question. A second survey was administered to faculty in the selected schools. More than 99% of students indicated instances in which the school library had “helped” them; these results provided research-based evidence for clarifying the role of the school library in K-12 education.

### Theoretical Framework

*Critical Incident Technique.* The Critical Incident Technique (CIT, Flanagan, 1954) is a “method of identifying behaviors (critical incidents) that contribute to the success or failure of a human activity,” and is “one of the most widely used methods in the behavioral sciences” (American Institutes for Research, 2005, ¶43). It has proven useful for research investigating cases of “exemplary” educational programs (Bycio & Allen, 2004, ¶8) and is often used when an understanding of the daily actions and impacts of a work environment is desired, as it was in Todd’s library survey. Because the technique can be used to collect quantitative or qualitative data, it “is appropriate for jobs that have a flexible or undefinable number of correct ways to behave” (Stitt-Gohdes, Lambrecht & Redmann, 2000, ¶2).

Because data are analyzed based on “an agreed upon statement of the purpose of the activity,” it is critical that research includes statements of aim that are representative of knowledgeable members of the profession. Wagner (1950, in Flanagan, 1954) used three kinds of informants (patients, dentists, and dental school instructors) to investigate critical requirements for dentists. Results of this study indicated that “the diverse opinions gave a more accurate total picture of critical requirements” (p. 332). A study of college psychology instructors had similar results; Smit (1952, in Flanagan 1954) found “substantial differences between the patterns of critical incidents reported by students and faculty” (p. 333). In other words, music educators are not the only professionals whose aims may differ from those of their

constituency. It is important, however, that instruments determining the impact of their work be defined at least partly by their perspective.

Research based on the CIT usually uses one or more of four primary data gathering methods: individual interviews, group interviews, questionnaires and “record forms” for recording interview data (pp.340-343). Data may be gathered by trained researchers or be self-reported. A contemporary application of this technique is reported by Bycio and Allen (2004), who found that adding a critical incident component to a yearly survey of graduate business students provided important information about the graduate program that they had not considered in making the survey

### **Method**

The primary focus of this pilot study is to investigate music teacher responses to descriptions of the impacts of music education from the literature (*impact, social functions, music learning, extra-musical learning, and teacher expertise*). The results of this pilot study will be used to develop a survey for a larger sample of music teachers, and to develop interview and observation protocols for future research.

A recent research initiative entitled *Sounds of Learning* (SOL) seeks to examine the *impacts* of music education on K-12 schooling (Hodges, 2005). Specifically, the project seeks “to examine music education's influence on (a) achievement and success in school, (b) all aspects of a child's growth and development, (c) the uses and functions of music in daily life, and (d) home, school, and community environments” (p. 1). The present study was designed to investigate the level of agreement regarding “impact” between practicing music teachers and the literature cited by the SOL initiative.

Asmus (2005) describes research regarding the impacts of music education on the school climate, learning, the learner (self-esteem), and non-musical subjects. These factors were included in questions about *impact* and about *extra-musical learning*. Haack (2005) offers Merriam's (1964) ten functions of music as potential descriptors for explorations of the impact of music study. Merriam's musical functions include: *communication; emotional expression; symbolic representation; aesthetic satisfaction; entertainment; physical response; encouraging conformity to social norms; validating social institutions and religious rituals; contributing to the continuity and stability of culture; and contributing to the integration of society.*

“Music instruction becomes concrete in the relationship between the activities of the teacher to facilitate learning and the behaviors by which the students show that learning has taken place” (Froehlich, 1992, p. 563). The *National Standards for Music* (MENC, 1994) were used as descriptors in the question about the *kinds of music learning* that led to the impact the music teachers were responding to. The *National Board for Professional Teaching Standards* (2004) served as descriptors for a question related to *music teacher expertise*. The following section offers analytic details of the study, including a description of the data, sample and analysis.

The *Critical Impacts of Music Questionnaire* (CIMQ) was administered in November of 2005. The survey consisted of a critical incident prompt inviting respondents to “Please think of a music class/rehearsal you taught recently that *had a strong impact* on your students,” followed by a 5-question survey that indicated their agreement with statements of impact. Each question in the survey was based on a description of impact from the SOL initiative.

While CIMQ was designed to be an online questionnaire, this pilot was administered to a convenience sample of music teachers who attended a professional development conference.

Respondents included 51 music teachers from 34 schools from 6 school districts in a northeastern state. The resulting data were analyzed using descriptive statistics. Further analysis involved the Chi-Square test for independence. Because of the exploratory nature of the study,  $p=.10$  was determined to be an acceptable level of significance.

### **Sample**

The data for this pilot study of the *Critical Impacts of Music Questionnaire* (CIMQ) was collected in November of 2005 during a professional development conference day. The CIMQ used the *Critical Incident Technique* (Flanagan, 1954) to investigate teacher responses to descriptions of *impact* from the literature. While the final version of the CIMQ will be administered online, this version of the study was a paper and pencil instrument.

The sample for this study consisted of 51 respondents from 34 schools in 6 school districts in a northeastern state. Respondents included 26 men and 25 women. Of these, 37 were White, 7 were African American, 2 were Latino/a, and 1 identified as “other.” Teaching experience was varied, with the largest number of respondents indicating 6-10 years ( $n=12$ , 23.5%) or more than 20 years ( $n=20$ , 39.4%). Teaching levels included early childhood (pre-K - 3,  $n=2$ , 3.9%), elementary school (K-5 or K-6,  $n = 15$ , 29.4%), jr. high/middle school (6-8,  $n=4$ , 7.8%), combined elementary/middle school (K-8,  $n=24$ , 47.0%), high school (9-12,  $n = 4$ , 7.8%) and combined middle/high school (7-12,  $n=1$ , 1.9%). Music teacher specialties included general music ( $n=29$ , 57%), instrumental music ( $n=15$ , 29.4%), choral music ( $n=20$ , 39.2%) and “other” (primarily music administrators,  $n=3$ , 5.8%), with 21 respondents including both general and choral music and 2 respondents indicating both general and instrumental music. Most respondents had attained either a BA or BS in music education ( $n=17$ , 33.3%) or an MA or MM Music Education, ( $n=18$ , 35.3%). Areas of certification primarily included Music N-12 ( $n=36$ ,

70.5%), Elementary education (n=3, 5.8%), supervisor (n=6, 11.8%), and principal (n=3, 5.8%).

Ten respondents (19.6%) indicated alternative certification.

## Results

### Impact

The first question after the prompt included various indicators of general impact. Responses to indicators in the area of *impact* included *school climate* (n=19, 44%), *classroom climate* (n=27, 63%), *self-esteem* (n=39, 83%) and *improved attitude* (n=37, 79%). While the majority of respondents did not indicate that their music class impacted school climate, a majority of choral music teachers (n=15, 75%) did indicate such an impact. A Pearson Chi-square calculation found this difference to be significant ( $X^2=7.143$ ,  $df=3$ ,  $p=.067$ ). There were no other significant differences between these responses.

### Social Functions

The present survey used Merriam's functions as descriptors to explore music teachers' impressions of the social meanings students gain from music class. A majority of respondents indicated agreement with *communication* (n=30, 63.8%), *emotional expression* (n=33, 70.2%), *aesthetic satisfaction* (n=33, 70.2%), *entertainment* (n=29, 61.7%), and *physical response* (n=24, 51%). The majority of respondents *did not indicate agreement* with *symbolic representation* (n=29, 61.7%), *encouraging conformity to social norms* (n=39, 83.0%), *validating social institutions and rituals* (n=35, 74.5%), *contributing to the continuity and stability of culture* (n=33, 74.5%), and *contributing to the integration of society* (n=35, 74.5%). A Chi Square test found significant differences between general, instrumental and choral music teachers for several of Merriam's functions. General music and choral music teachers were significantly more likely to indicate *emotional expression* than other music teachers ( $X^2=8.42$ ,  $df=3$ ,  $p=.038$ , general

music;  $X^2=12.21$ ,  $df=6$ ,  $p=.057$ , choral music). General music teachers from elementary schools were significantly more likely to indicate that *entertainment* was an important impact of music class ( $X^2=14.238$ ,  $df=6$ ,  $p=.027$ ); for choral teachers in elementary schools the difference was also significant ( $X^2=7.200$ ,  $df=3$ ,  $p=.066$ ). Although only a small majority of respondents (51%) indicated that *physical response* was an important impact of musical study; instrumental music teachers were more likely than other teachers not to choose this response ( $X^2=7.449$ ,  $df=3$ ,  $p=.059$ ).

### **Music Learning and Extra-musical Learning**

The CIMQ used the National Standards for Music (MENC, 1994) to explore the music learning involved in the question of impact. Respondents were asked to indicate “the *music learning* that led to the impact for your students.” A majority of respondents indicated that *singing, performing on instruments, reading and notating music, and listening to, analyzing and describing music* were the kinds of music learning that most impacted their students.

A Chi Square test for independence found the following differences between responses. General music teachers at all levels were significantly more likely than other teachers to indicate that singing was a critical part of impact ( $X^2=12.801$ ,  $df=6$ ,  $p = .046$ ). Instrumental music teachers were significantly less likely to report that singing led to the impact of their teaching ( $X^2=15.810$ ,  $df=3$ ,  $p = .001$ ). Correspondingly, music teachers who did not identify themselves as instrumental music teachers were significantly less likely to attribute the impact of a music class to playing instruments ( $X^2=15.552$ ,  $df=6$ ,  $p = .016$ ) and instrumental music teachers were significantly more likely to indicate that playing instruments led to the impact of their class ( $X^2=11.223$ ,  $df=3$ ,  $p = .011$ ).

A follow-up question asked respondents to indicate the kinds of *extra-musical learning* that were connected to the high-impact class they had recalled. A majority of all respondents indicated that language learning, math learning, and social studies learning were results of the class they had in mind. Instrumental music teachers were significantly *less* likely to indicate science learning as an extra-musical outcome of music instruction.

### **Music Teacher Expertise**

The National Board for Professional Teaching Standards (2004) has published national teaching standards that describe “what teachers should know and be able to do.” These standards were the basis of the final question, which asked respondents to mark “the kinds of *music teacher expertise* that led to the impact on your students.” Results, indicate that a majority of teachers identify with most of the teaching standards, including *Recognizing and adjusting to individual differences in students*, (n=38, 82.6%), *Understanding how students develop and learn* (n=32, 69.6%), *Treating all students equitably* (n=26, 56.5%), *Appreciating connections between music knowledge and other kinds of knowledge* (n=34, 73.9%), *Using multiple paths to knowledge* (n=31, 67.4%), *Using group settings to enhance learning* (n=30, 65.2%), and *Keeping all students engaged* (n=41, 89.1%). There was a 50/50 split in responses to *Developing capacities beyond cognitive ability* and *Having taught this lesson before*. The two NBPTS standards that did not indicate majority agreement include *Assessing student progress on a regular basis* (n=20, 43.5%) and *Focusing on the key concepts and objectives of the lesson* (n=17, 37%).

## Discussion

The continued interest in the impacts of music education from educational policy makers (as evidenced by the availability of Federal Title I funds for research and professional development for interdisciplinary arts education), organizations that support performers (such as the National Endowment for the Arts and the Arts Education Partnership) and the music industry (seen in funding initiatives and widespread public relations efforts) indicates widespread public support for the idea that music education impacts schooling in important ways. Such research often examines the input (facilities, equipment, instructional time, or teacher training) or the outcome (the presence or absence of a particular kind of musical or extra-musical *impact*) without examining the specific aspects of music teacher practice and music learning that must be in place to support the desired impact. For music educators, however, music teacher expertise and student music learning are key to understanding questions of impact. Research is therefore needed that investigates these issues. As a step in that direction, the present study sought to investigate the extent to which music teachers were in agreement with a) descriptions of impact from the literature, b) descriptions of music learning from the National Standards for Music, and c) descriptions of teacher expertise from the National Board for Professional Teaching Standards.

### Impact

Most respondents indicated agreement with the descriptors of general impact from the literature. In terms of general impact on the school environment, respondents agreed that music class impacted classroom climate, self esteem and an improved attitude, but only choral music teachers indicated that their classes impacted the school climate. This is particularly interesting in light of the fact that the teachers in this study were from elementary schools in primarily urban

areas. The school choir often involves students from several classes across grade levels, and unlike band or orchestra does not involve an investment of additional time or finances on the part of the students' families. Indeed, the school choir in such situations may be in a better position to impact a low-income school musically and non-musically than other kinds of music classes. A follow-up survey in this area might use open rather than closed questions, checking for additional impacts and further exploring connections with the literature. Observations of music classes in school settings might further clarify the impacts on the school environment.

### **Social Functions**

The responses to Merriam's descriptions of the social functions of music were mixed. The descriptors that music teachers most frequently indicated (*communication, emotional expression, aesthetic satisfaction, entertainment, and physical response*) are among the typical rationales for music education shared by the profession and the general public. The descriptors that did not receive positive responses include *symbolic representation, encouraging conformity to social norms, validating social institutions and rituals, contributing to the continuity and stability of culture, and contributing to the integration of society*. Possible reasons for the lack of agreement with these descriptors are not as clear. As Haack (2005) suggests, it could be that "[m]any are not aware of the degree to which music may encourage and even enforce conformity to social norms" (p. 9). But the complex wording of these descriptors when compared with the others, or the lack of time respondents had to answer the questionnaire could also have contributed to the lack of agreement with these factors. Prior to the follow-up survey, these factors will be clarified by asking "knowledgeable experts" to "summarize their interpretation of what they ha[ve] been asked to do" so the questions can be more "uniformly interpreted" (Flanagan, p. 334).

### **Music Learning and Extra-Musical Learning**

Responses to questions about music learning and extra-musical learning are not surprising; *singing, performing on instruments, reading and notating music, and listening to, analyzing and describing music* are the most traditional activities in music classes. Responses to non-musical learning were also not unexpected. Many schools insist that music teachers include connections to non-musical learning in their weekly lesson planning, and the No Child Left Behind legislation emphasizes language learning and math learning. Unfortunately, the bivariate nature of the questions did not allow for further analysis of the responses. Given the fact that so little is known about the kinds of music learning that lead to high levels of extra-musical impact, this limitation should be addressed in future research, both with open-ended survey or interview questions and observations of music teachers in school settings.

### **Music Teacher Expertise**

The responses of the music teachers involved in the present study indicate agreement with most of the teaching standards sanctioned by the NBPTS. The fact that general music teachers, particularly in elementary schools, were more likely to report using “multiple paths to knowledge” suggests that there may be interesting differences between their instructional approaches and those used by teachers of performing ensembles. Instrumental music teachers who were *least likely* to indicate a concern for equitable treatment of students, connections between music and other subjects, and multiple paths to knowledge were *most likely* to indicate that regular assessment of student progress led to the impact of their teaching. Clearly further exploration of these differences, preferably including observation and interviews with music teachers representing a wide variety of student populations, is needed to clarify these differences.

## **Limitations**

The survey described in this proposal was a pilot study, administered to a convenience sample of music educators who teach in schools from a particular demographic. Its results, therefore, may not be entirely representative of the profession. The nature of the survey questions, limited primarily to descriptions of impact from a specific research initiative did not allow teachers to offer their own interpretations of impact, nor did their bivariate nature enable respondents to indicate a degree of agreement. Further research should address these limitations.

## **Conclusion**

Smith (2002) uses the parable of the elephant as an analogy for the disparate nature of opinions regarding the aims and impacts of arts education. As the story goes, a ruler from a far off land sends a group of experts to determine the nature of an elephant. Not surprisingly, each expert can only access one part of the large animal (trunk, leg, tail, etc.) and thus, in spite of Herculean efforts can provide only a limited description of the beast (p. 749). This pilot study offers a similarly limited glimpse of a large and complex issue. The impacts of music education should continue to be addressed by members of the music education profession, as well as by the constituency the profession serves; further, the varied constituencies must create opportunities to come together and share their varied understandings of the “beast” in question.

From the perspective of this music educator, research is needed that investigates the kinds of music teacher actions, in and out of the classroom, that lead to the positive impacts sought by the general public. Such research should 1) continue to explore the perspectives of music teachers relative to the impacts of music instruction and the factors that lead to those impacts; 2) use these perspectives as the basis for qualitative and quantitative descriptive research with effective school music programs (classes, facilities, and school environments) across a variety of

socio-economic and achievement levels, and 3) test the effects of this kind of curricular arrangement in settings where they are not already in place.

### References

- American Institutes for Research. (2005). Timeline. Retrieved on July 27, 2006 from <http://www.air.org/overview/timeline.aspx>.
- Asmus, E. P. (2005). The Impact of Music Education on Home, School, and Community. Greensboro, NC: Sounds of Learning. Retrieved on October 24, 2005 from <http://www.uncg.edu/mus/SoundsOfLearning/HomeSchoolCommunity.pdf>
- Burton, J., Horowitz, R. & Abeles, H. (1999). Learning in and through the arts: Curriculum implications. In E. B. Fiske (Ed.). *Champions of change: The impact of the arts on learning*. Washington, D.C.: President's Committee On The Arts And The Humanities, 35-46.
- Bycio, P. & Allen, J. S. (2004). A Critical Incidents Approach to Outcomes Assessment. *Journal of Education for Business*, 80 (2), 86-92.
- Chapman, L. H. (2001). Can the arts win hearts and minds? *Arts Education Policy Review*, 102 (5), 21-23.
- Deasy, R. J. (2002). *Critical Links: Learning in the Arts and Student Academic and Social Development*. Washington, D.C.: Arts Education Partnership.
- Fiske, E. B. (Ed.). (1999). *Champions of Change: The Impact of the Arts on Learning*. Washington, D.C.: President's Committee On The Arts And The Humanities.
- Flanagan, J. C. (1954, July). The critical incident technique. *Psychological Bulletin*, 51, 327-358.
- Frierson-Campbell, C. (2003). Professional Need and the Contexts of In-Service Music Teacher Identity. In H. Froehlich, D. Coan & R. R. Rideout, *Sociology of Music Education Symposium III: Social Dimensions of Music, Music Teaching, and Learning (p. 199-216)*. Amherst, MA: Department of Music and Dance, University of Massachusetts.
- Hetland, L. & Winner, E. (2001). The arts and academic achievement: What the evidence shows. *Arts Education Policy Review*, 102 (5), 3-6.
- Hodges, D. & O'Connell, D. (2005). The impact of music education on academic achievement. Greensboro, NC: Sounds of Learning. Retrieved on October 24, 2005 from <http://www.uncg.edu/mus/SoundsOfLearning/AcdemicAchievement.pdf>
- Hope, Samuel. (2001). *REAP: More than fifteen minutes?* *Arts Education Policy Review*, 102 (5), 7-9.
- Haack, P. A. (2005). *The uses and functions of music as a curricular foundation for music education*. Greensboro, NC: Sounds of Learning. Retrieved on October 24, 2005 from <http://www.uncg.edu/mus/SoundsOfLearning/UsesFunctions.pdf>
- National Board for Professional Teaching Standards. (2004). *What teachers should know and be able to do*. Arlington, VA: Author. Retrieved from [www.nbpts.org/about/coreprops.cfm#knowdo](http://www.nbpts.org/about/coreprops.cfm#knowdo) on August 1, 2006.
- Redmann, D. H., Lambrecht, J. J. & Stitt-Gohdes, W. L. (2000). The critical incident technique: A tool for qualitative research. *Delta Pi Epsilon Journal*, 42 (3), 132-53. Retrieved from Wilson Omni Web on June 13, 2006.

- Stitt-Gohdes; W. L., Lambrecht, J. J. & Redmann, D. H. (2000). The Critical-incident technique in job behavior research. *Journal of Vocational Education Research*, 25 (1), 59-84.
- Todd, R. (2003). *Student learning through Ohio school libraries: A summary of the Ohio research study*. Columbus, OH: Ohio Educational Library Media Association. Obtained from <http://www.oelma.org/studentlearning.htm> on October 24, 2005.
- Twelker, P. A. (2003). *The Critical Incident Technique: A Manual for Its Planning and Implementation*. Deerfield, IL: Trinity International University. Retrieved from [http://www.tiu.edu/psychology/Twelker/critical\\_incident\\_technique.htm](http://www.tiu.edu/psychology/Twelker/critical_incident_technique.htm) on October 24, 2005.