

Music Cuts and Reverse Economics

Dr. John Benham

Most people don't realize that money is actually saved by making in-school music programs stronger – and that it costs more in the long run to make cuts to programs. This concept of “reverse economics” is at the heart of nearly every school board discussion about making cuts to music programs and it's especially important for advocates to understand it to help protect public school programs in tight economic times.

In this two-part series, you'll collect and analyze the data that underlies your district's student enrollment, participation in music programs, and teacher loads, and then learn how to use it to make a strong fiscal case for your music program.

To help frame your examination of your district's situation, consider these potential scenarios and their impact on full student participation in music programs:

1. If the average (district-wide) student loads of secondary music performance teachers are smaller than classroom teachers, you will be in the weakest financial position to preserve or build your program. If you ask why, you'll often find the solution to saving the program. For example, you may uncover administrative issues that prevent student participation such as guidance counselors who tell students not to take the arts, or a refusal to schedule music performance classes in a way that facilitates student participation.
2. If the average student loads of secondary music performance teachers are the same as those of other classroom teachers, you are financially justified in fighting to take only your fair share of cuts. **However, it is strongly recommended that music supervisors, music teachers and advocates [assume a posture of “no cuts”](#)**; if cuts are made, administration and school board will be able to blame you for suggesting them.
3. If the average student loads of secondary music performance teachers are normally larger than those of the regular classroom teacher, this is where music programs should be economically most secure. Any cuts in music programs under these circumstances are economically counter-productive. The primary cost factor in education is personnel. The most cost-efficient personnel are those who instruct the largest number of students in a given class period and/or who carry the largest student loads. (See my series of articles on [FTE](#) and FTE Value)

Collecting & Analyzing Data About Student Music Participation – A District Level Exercise

How do you best demonstrate the positive financial significance of high participation in music performance courses? You start by [using the Public School Music Participation Survey to collect data about students enrolled in music programs](#). (Note: This discussion relates only to [curricular](#) music programs (meaning those held during the regular school day) as opposed to co-curricular or extra-curricular programs. The data below includes only band enrollments to simplify the

information. Normally, all music performing organizations would be included in the data to provide more complete information.)

Editor’s Note: *The following is an exercise in analyzing key district data in order to understand your situation and begin to make your case. This information was taken from a recent effort by the author to help a district defend its music program.*

This chart shows student enrollment in band from grades 5 through 12.

Student Participation in Band (20__-20__)									
School/Band	Gr 5	Gr 6	Gr 7	Gr 8	Gr 9	Gr 10	Gr 11	Gr 12	Total
Elementary A	30	10							40
Elementary B	38	25							63
Elementary C	38	40							78
Elementary D	46	48							94
Elementary E	7	12							19
Elementary F	25	20							45
Elementary G	33	45							78
Elementary H	38	32							70
Elementary I									0
Elementary J	15	17							32
Junior High A			98	62	41				201
Junior High B			53	53	47				153
High School						107	64	60	231
Alternative HS									0
¹ Band Totals	270	249	151	115	88	107	64	60	1104
² District Enroll	610	639	685	696	787	769	732	703	5621
³ % of Dist Enroll	44%	39%	22%	17%	11%	14%	9%	9%	20%
⁴ Enroll Disparity		-8%	-39%	-24%	-23%	22%	-40%	-6%	
⁵ Max 15%	270	230	195	166	141	120	102	87	1310
⁶ 65% + 15% max	397	337	286	244	207	176	150	127	1923
⁷ Eliminate Gr 5	0	87	53	40	31	37	22	21	292

This district consists of ten elementary schools, two junior high schools, one high school and an alternative high school. In this case, students enrolled at Elementary School I and in the alternative high school were not offered the option to participate in band. A total of 585 (load-bearing/non-pull-out) students participate in band in the secondary grades. An initial analysis (listed 1-6 at the bottom of the chart) reveals this about student enrollment in band:

1. Band enrollments, listed by school and grade, total 1104 student participants. Of those students, 585 are in grades 7-12 (load bearing/non-pull-out).
2. District enrollments, by grade, show 5621 students eligible for participation.
3. The percentage of eligible students participating in band, indicated by grade, shows 20% of all eligible students participating.
4. Enrollment disparities, evident in individual schools and in between grades district wide, should be examined for causality. [Districts identified as of qualitative excellence consider 65% of grade 5 students as a minimum target level for participation; and, a maximum of 15% attrition between any two grades.]**
5. If enrollment disparities (as related to attrition) were reduced to a minimum of 15% in all grades, student participation would increase to 1310. Of particular significance are the percentages in grades 6, 7, 8, 9, and 11.
6. If the district achieved the quantitative status of a profile of excellence, there would be 1923 students participating in band.

Now, if we combine the band, choir and orchestra enrollment data for the same district with the FTE information gathered from pages 1-3 of the Public School Music Participation survey, we can determine the average FTE value of the music performance teachers. This is summarized in the table below, **Average Student Loads (Secondary Example)**, based on the following information:

1. There are 2,589 students in band, choir and orchestra in all grades.
2. There are 1,714 secondary band, choir and orchestra students.
3. There are 10.2 FTE secondary band, choir and orchestra teachers.
4. The average student load of the secondary music performance teacher is 168: [1,714 students divided by 10.2 FTE teachers].
5. The average student load of the secondary non-music classroom teacher is 116: [5 classes multiplied by the average class size of 23.2 students]. [Note: The average student load of non-music classroom teachers is inflated by the large number of students in music performance classes.]

AVERAGE STUDENT LOADS (Secondary Example)			
FTE	Classification	Classes x Students	Student Load

1.0	Non-music Classroom Teacher	5 x 23	116
<u>1.0</u>	Band, Choir, Orchestra Teacher	5 x 23	168
2.0	Teachers		284
1.0	Non-music Classroom Teacher	5 x 23	116
1.0	Non-music Classroom Teacher (new)	5 x 23	116
<u>.4</u>	New Classroom Teacher (new)	2 x 26	<u>52</u>
2.4			284

* Note: Numbers are rounded to the nearest whole number.

Based on the comparison of the average student loads of music performance and non-music classroom teachers illustrated in the table above, the following factors become evident:

1. There are 10.2 FTE positions assigned to the grades 5 through 12 band, choir, and orchestra curriculum.
2. The average student load of the secondary music performance teacher equates to 1.4 FTE value as compared to non-music classroom teachers.
3. The 10.2 FTE secondary music performance teachers total FTE value is equivalent to 14.28 FTE non-music classroom teachers, an excess of 4.08 FTE.

Therefore, it may be demonstrated that this overload:

Includes the costs for any small group or individual lessons provided to secondary students by the music teachers.

Justifies the inclusion of any music classes in the curriculum that may be under the normal minimum number.

Assists the district in maintaining smaller class sizes in other academic areas of the curriculum.

Pays for the elementary feeder program equivalent to the excess value (4.08 FTE). In this particular district, there were only 4.3 FTE elementary instrumental teachers.

Districts rarely recommend the elimination of a secondary music performance curriculum, because they recognize the value of these large music classes. Normally they initially eliminate the elementary feeder system because they assume that there is already a classroom teacher to manage the students, and that there will be no long-term negative effect on the secondary enrollment in band.

In the next article, I'll show how eliminating elementary music programs to "solve" current budget problems turns out to be fiscally irresponsible in the long-term.

Dr. John Benham

** "What Makes a Music Program Strong," Robert Culver, University of Michigan. Based upon findings from his 1990 research project involving 50 districts and 113 instrumental music teachers from 27 states.

I showed you how to collect and analyze district-wide data related to student participation in music programs. Many school board members assume that eliminating elementary music education programs will ease present day budget crunches, as well as longer-term budgetary constraints, with little detrimental effect on student participation in music in the upper grade levels.

Nothing could be further from the truth.

We already know the intrinsic value of music education for students: this article shows that maintaining strong elementary music education programs offers long-term fiscal value as well.

Extensive national case studies indicate that when the grade 5 elementary instrumental and/or choral feeder system is eliminated, the subsequent decline in student participation at the secondary level will be a minimum of 65%. Within four years this decline in participation is incurred at the high school level. [Note: This has to do with the well-known concept of "windows of learning" opportunities that reach their maximum level between ages 10 and 12. See the last line on the chart from [Part 1, Student Participation in Band](#), (7 - "Eliminate Grade 5,") to see the anticipated impact on band enrollment in subsequent grades.]

Any circumstance that causes a decline in student enrollment or prevents students from participation will have a negative cost effect on the district budget. In the chart above, the anticipated long term loss of 380 band students (caused by the proposed elimination of grade 5 band) would necessitate the eventual employment of 3.3 FTE secondary non-music class room teachers (380 students/116 student load average), while maintaining an appropriate number of music performance FTE to continue the program of those students still electing participation.

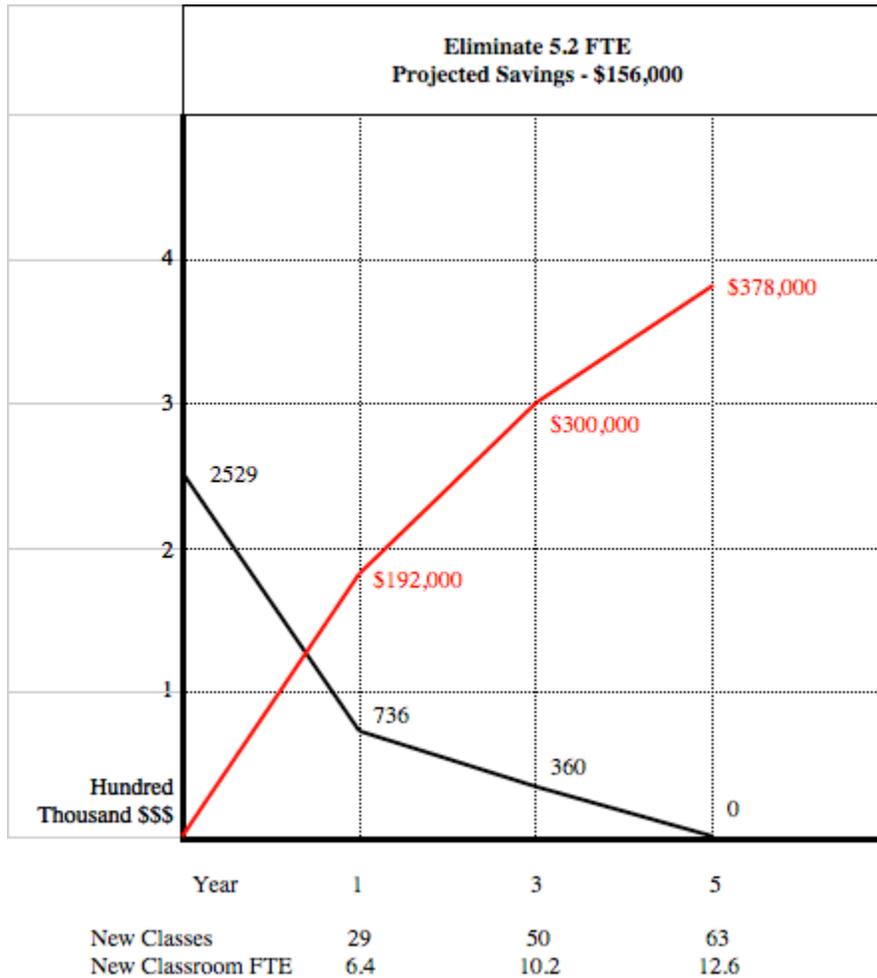
The elimination of an elementary music performance "pull-out" program only delays the reverse economic effect for a year or two until those (former or potential) students reach the secondary school level. At that point, the temporary "solution" becomes the cause of an even deeper financial crisis.

Eliminating Music Programs: The Financial Effect

A second case study, represented in the chart below, illustrates the financial effect of cutting music programs. In this district the administrative proposal was to eliminate 70% of the orchestra staff, and 48% of the band staff (initially equated to 7.8 FTE). However, the district indicated

that they would only cut 5.2 FTE band and orchestra positions for an anticipated annual savings of \$156,000 (based on an average salary figure of \$30,000, excluding benefits.)

What they didn't do is calculate the impact on student enrollment. In the following chart, there were originally 2,529 students in band and orchestra in grades 4 through 12, including two high schools, four middle schools, and eight elementary schools.



In the first year of these proposed cuts, all instrumental students in grades 4, 5 and 6, approximately 1800 students, would be eliminated from participation in band and orchestra. No new students would be started in either band or orchestra until grade 7. In addition, enough middle students would have been eliminated so that the district would have needed to open 29 new classes and hire 6.4 FTE classroom teachers to replace the 5.2 FTE instrumental teachers to teach former instrumental music students (6.4 FTE x \$30,000 at a cost of \$192,000).

By year three, since no new students would have been started during those years, more non-instrumental students would have moved into the upper grades, and senior classes would have been graduated, the district would have been required to hire 10.2 cumulative FTE for 50 classes at a cost of \$300,000. Only 360 combined band and orchestra students would have remained in the program for the 14 schools.

By year five, for all practical purposes, the band and orchestra programs would have collapsed. The district would have needed to hire 12.6 cumulative classroom FTE for 63 classes of former instrumental music students at a cost of \$378,000. Added to the anticipated savings of \$156,000 this would have amounted to an annual budget miscalculation (reverse economic effect) of \$534,000.

Using Data & Concept of Reverse Economics Can Save School Music Programs

In this district, thankfully, advocates in the music coalition were able to use data and the concept of reverse economics to show that the long-term effects of eliminating the music program would cost more than the initial savings anticipated. Perhaps you're not surprised to find that, when presented with this information, the board overruled the administrative proposal to cut the music programs and reinstated all of the instrumental music positions.

Should you need further information, please write to me at <jlbenham@gmail.com>

A financial crisis always exposes the underlying educational philosophy of your school district.