

Comparing the Outcomes

Two different styles of teaching were used in this study: the traditional and the puzzle approach. In the traditional approach students were introduced to the music objectives by sequential procedures including imitation, echo singing or playing, and lecturing, where questions were used to determine the students' understanding. In the puzzle approach students were asked to solve a musical puzzle by reconstructing a melody on xylophones. The students shared their discoveries during each class period and questions were used to encourage the process of puzzle solving for both the students and the teacher. Each student was considered an equal part of the process, and no answers were considered right or wrong.

The end result showed that both groups solved the final puzzle equally well. The traditional group finished the task faster than the puzzle group, and all students were successful in solving the task, either independently or with some help from each other and class discussions. Students were able to identify the musical alphabet and pitch direction.

Students in the puzzle group worked more slowly but were more intensely involved in the final task. They went beyond the task directions to explore different ways of recreating the song such as taking turns, playing together and dividing the song in parts by starting on different pitches. One group performed the song as a round. Very few puzzle students chose to start on the given starting pitch. Even though it had been given to them, it was as if needed to be "discovered" by the students themselves. Since this class was much more interested in the process rather than the end result, several of them did not have time to write down the song at the end. It was interesting to note that students used correct terminology when identifying and describing each other's problem spots, even though the words had never been explicitly presented. They also gave each other detailed suggestions on how to solve the puzzle.

From a teacher's point of view, it seemed like the students in the traditional group learned the concepts sooner. It was easy to determine students' progress by observing performances of the song and student responses to questions. There was a planned sequence which made the process feel under control. In the puzzle group, during the first several music periods it seemed as if little or no learning was taking place. Students experienced many hardships. However, when a student discovered something and shared it with the others, students became inspired and continued more intensely to solve the problem. Students problem solved within their groups but would also approach other students, and often preferred other students' suggestions over the few that were offered by the teacher. In the end, the puzzle group provided more information about individual students' musical thinking than the traditional group. It was interesting to notice that over the course of the study my teaching style changed with the traditional group, where open ended questions were asked and student responses were carefully listened to. The class also problem solved more together about each other's responses. It was a challenge not to give any suggestions for students in the puzzle group and to be thoroughly involved in the process by observing and listening to understand students' musical thinking.

Conclusions

As a teacher my goal is to plan in a way that ensures student learning. This is usually done by detailed lesson plans that include all modalities, where each step and sequence is identified, where students can learn in different settings, such as cooperative learning groups. Often this kind of approach means a controlled learning environment where learning success is determined by correct responses and correct singing

or playing of an instrument.

The puzzle approach is a teaching strategy that can be used to gain insight into the students' musical thinking. It is a reflection-in-action process for the students and the teacher, where students can involve all their own individual learning strategies. Students' responses are viewed as a step in the process of understanding their musical thinking, rather than as simply right or wrong. This fits in with the view of constructivism that understanding is actively constructed rather than passively received. This process can at times feel out of control for the teacher due to the absence of sequential planning procedures. To be an effective part of the puzzle solving process a teacher needs to practice listening and probing skills. It takes practice to ask critical questions.

The final results show that students who learned through the puzzle approach gained at least as much knowledge as the students who were taught using a traditional approach. The disadvantages are feeling a lack of control when there is no apparent sequential strategy involved and a greater difficulty to immediately recognize student achievement. It is difficult to view answers as a path to the students' musical thinking rather than right or wrong responses. The advantages with the puzzle solving approach were that students were very engaged in the process, were able to work together to solve the problem and took a very creative approach to a new problem solving task. Puzzles can help students acquire knowledge from discoveries rather than from teachers and allows the teacher to discover what the answer means to the student who knows it.

Further Reading:

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The Impact of Block Scheduling on the High School Music Program

by Ann Clements and Steven M. Demorest

Introduction

For many decades, educational reformers have been searching for the answer to how we can revise the school day to improve student learning, especially at the secondary level. High schools in the United States have been criticized for making students and teachers "prisoners of time" (National Education Commission on Time and Learning, 1994). As a result there has been an abundance of revised scheduling plans, the most popular of which has been labeled "Block" scheduling. As new schedules are proposed or implemented it is important for music educators to understand and evaluate

the impact of these reforms on their programs. As many secondary schools consider or make changes to the secondary school schedule it is important for music educators to ask the question, "What are the potential effects of block scheduling to music educators, music students, and music programs in general?"

The intent of this study is to examine the effect that changing from a traditional six or seven period school schedule to block scheduling has had on high school ensemble based music programs in the greater Puget Sound region. Specifically, the effect of different block scheduling options on student enrollment in ensemble classes, teaching approaches, student practice habits, ensemble retention and class climate. The goal of this research is to help secondary music educators understand and anticipate the possible effects (both positive and negative) of certain types of block scheduling on the music program.

Definitions

Block scheduling varies greatly from school to school and variation on these schedules are boundless. Figure 1 (page R8) lists a few of the most widely used block schedules and a brief synopsis of how each structure works.

When these different models are examined closely, some concerns arise about music participation. The 4X4 semester block design can make it difficult for students to participate in a music ensemble for their complete high school tenure. In this description, a student who signed up for choir during all four years would graduate with eight full credits of music (Hoffman, 1995; Hook, 1995). The problem becomes even more serious when college entrance requirements are considered. Students taking eight credits of a performance class may not have time to fit in other requirements such as foreign language, business or other music classes. In the four period alternating day, students receive only one credit for the entire year, but the director sees them every other day. Still the alternating schedule seems more conducive to music because a student can participate all year while tying up only one credit. In both of these schedules the lengthened time period itself may have a downside. "Often students have a difficult time paying attention that long, and mental fatigue sets in. Also there's a physical endurance factor (Hoffman, 1995, 42)."

There is a limited amount of research information regarding the effects of block scheduling on education as a whole, and virtually none on music in particular. Informal surveys have shown that some music educators see advantages in the longer class periods. Among the biggest praise for block scheduling is that the extended period allows for teachers to include more variety of activities and methods, which provide more opportunities to enhance student learning. "When you have the student for ninety minutes at a time you can rehearse what you need to and incorporate plenty of other activities (Hoffman, 1995, 42)."

Hook (1995) surveyed members of the Choralist and Music-Ed listservs as well as selected Missouri choral directors to examine block scheduling's effect on choral ensemble classes. He found that choir classes were positively affected by block scheduling in solo and ensemble preparation time, festival and contest preparation, the opportunity to present music history/theory and student response to music history/theory. Block scheduling negatively affected choir classes in the areas of daily practice and reinforcement, retention of materials from one rehearsal to the next and the regular concert schedule. Playing or singing endurance, opportunity to enroll in additional music classes, and communication and report between student and director were not significantly affected. Despite these mixed results, many music educators believe that block scheduling will have a negative impact on both enrollment and quality in their programs, and they are generally opposed to switching.

Methodology and Procedures

For this study, a questionnaire was created to evaluate the impact of block scheduling on high school secondary ensemble classes in the greater Puget Sound region. There were two main questions for the study: 1) Does block scheduling have a positive or negative impact on music programs regarding enrollment, student achievement or other program issues; and 2) Does the impact differ by type of ensemble or type of block schedule? Surveys were sent to 42 high school band, choir and orchestra directors whose schools have changed from the traditional six or seven period day to one of the block schedule models previously defined. 48% of the questionnaires were returned, of those returned 46% were from band directors, 36% from choir directors and 18% from orchestra directors. 73% of the directors responding teach in only one ensemble area, while 27% teach in more than one ensemble area (eg. band and choir).

Survey Section 1

Section one of the survey asked for a description of program demographics. Information included the number of years on block schedule, the type of block schedule and enrollment figures prior to and following the change to block scheduling. 63% of the respondents were in their second or third year of block scheduling and all previously defined types of block scheduling were present in this sample.

Surprisingly, on average the number of students involved in the programs and the average of music classes offered increased as a result of the move to block scheduling. 14% of the schools experienced an enrollment drop, 50% had no change, and 36% showed an increase. Where enrollment increased, the change was substantial; whereas, the decreases were minor. Course offerings increased for 27% of the schools, decreased for 5% and remained the same for 68%. Thus it would appear that a change to block scheduling either enhanced or did not affect enrollment and course offerings in music for the majority of these schools.

Survey Sections 2 and 3

Sections 2 and 3 of the survey dealt with questions regarding student achievement, course content and other program concerns. The questions in Section 2 were asked in terms of how block scheduling either enhanced, hampered or did not affect selected variables (Table 1).

The results show that, not surprisingly, block scheduling has hampered students' playing/singing endurance and student retention of material. However, it appears to have enhanced solo and ensemble preparation, the opportunity to present theory and history, and the quality of planning and preparation.

The questions in Section 3 dealt with the teacher's perceptions of prep time, student work and absenteeism. Answers were given in terms of an increase or decrease since moving to block scheduling (Table 2). Block scheduling appears to have greatly increased the number of teaching strategies used by teachers and the amount of per-class preparation time.

Results by Area and Schedule Type

The data were analyzed to see how program enrollment and course offerings were affected based on performance area, (i.e., band, choir or orchestra), and type of block schedule. This information may be very useful to help teachers determine which type of schedule would be most helpful or harmful to their program if their school is considering switching to block scheduling. As mentioned before, enrollment and course offerings increased on average for the schools who moved to block scheduling. However, it is possible that some types of ensembles were hurt by the move while others were helped. The follow-

ing enrollment figures are broken down by teaching area. After the move to block scheduling, 30% of the bands showed an increase in student enrollment ranging from 20 to 60 students. 20% of the bands showed a decrease of 10-20 students, and 50% showed no change. 25% of choirs experienced an increase of 30-40 students, while the 12.5% that had a decrease lost only 10 students. Again 50% showed no change. Orchestra was evenly split with 50% showing no change and 50% adding 10-30 students.

Course offerings increased on average with the change to block scheduling. 70% of the participating bands showed no change in number of courses offered, with 10% losing a course, while 20% gained a course. 25% of the choirs gained a course with no losses, and 50% of the orchestras gained a course with no losses.

Conclusion

As many schools in Washington contemplate moving to a block schedule, music educators should be comforted somewhat by the knowledge that block schedules did not appear to have a negative impact on either the size or quality of the music programs surveyed. Despite the lack of evidence regarding negative impact of the block schedule in this or other surveys, the attitude persists that block schedules are bad for music. In fact, 57% of the directors responding to this survey still favored a return to the traditional six or seven period day. This persistent negative attitude may be the result of administrative approaches to scheduling. For example, 33% reported not being involved in the decision to change schedules, and 64% felt that staff development efforts were inadequate in preparing them to move to the block schedule. This suggests that there may be problems with the block schedule that go deeper than enrollment or program variables. Clearly further research is needed since it would appear that block schedules are here to stay.

References:

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Figure 1

Type of Schedule	Definition	Term required for one full H.S. credit	Classes per term	Time spent in class	Classes per day
Straight Block	4 period day	Semester	4	90 minutes	4
3x3	3 periods per day alternating every other day	Year	6	120 minutes	3
4x4	4 periods per day alternating every other day	Year	8	90 minutes	4
Modified Block 1	_ day Block schedule, _ day traditional schedule	Block - Semester Traditional Year	Block-3 Traditional-2	Block-90 Traditional-45	Block-3 Traditional-2
Modified Block 2	2 days Block, 3 days Traditional	Year	6	Block-120 Traditional-60	Block-3 Traditional-6
Modified 3X3A	4 days 3x3 Block 1 day Traditional	Year	6	Block-120 Traditional-60	Block-3 Traditional-6
Modified 3X3B	Regular School day 3X3 Block, 0 and 7 7periods Traditional	Block-Semester Traditional-Year	Block-6 Traditional-2 2	Block-120 Traditional-50 (outside regular school day)	Block-3 Traditional-2 2 (optional)

Table 1. How has block scheduling affected the following areas:

Question	Enhance	Hamper	No Effect	N/A
12) Students playing / singing endurance	13.6	40.9	36.4	9.1
13) Retention of material from one day to the next	27.3	36.4	27.3	9.1
14) Regular concert performance schedule	13.6	18.2	54.5	13.6
15) Solo/Ensemble preparation	31.8	18.2	31.8	18.2
16) Large Group Contest preparation	27.3	27.3	22.7	22.7
17) Opportunity to present topics in music theory and/or history	54.5	13.6	18.2	13.6
18) Students attitude toward music theory and/or history	22.7	4.5	54.5	18.2
19) Communication between students and director	22.7	22.7	40.9	13.6
20) Rapport between director and students	22.7	9.1	54.5	13.6
21) Quality of planning and class preparation	45.5	9.1	36.4	9.1
22) Teacher and parent communication	13.6	9.1	68.2	9.1
23) Parent involvement	9.1	4.5	77.3	9.1

Table 2. Since moving to block scheduling:

Question	Increased	Decreased	Unchanged
24) The number of teaching strategies I use in class has:	59.1	0	40.9
25) The amount of homework required has:	22.7	4.5	72.7
26) My expectations for student achievement have:	22.7	0	77.3
27) The quality of student work has:	27.3	18.2	54.5
28) My evaluation of individual student evaluation has:	36.4	4.5	59.1
29) Student absenteeism has:	9.1	18.2	72.7
30) My per-class preparation time has:	45.5	9.1	45.5