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Scheduling AP classes in a 2X4 block schedule: The Mayfield plan

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Abstract (Summary)

Hansen, Gutman, and Smith describe a way of handling Advanced Placement courses in a 2X4 block schedule that raises the passing rate, more than compensates for the loss of contact time, and gives the vast majority of students opportunities to take the AP classes they want. The schedule allows students to take four classes per semester; faculty members teach three classes and have one planning period.

Full Text (2260 words)

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[Headnote]

The authors describe a way of handling Advanced Placement courses in a 2X4 block schedule that raises the passing rate, more than compensates for the loss of contact time, and gives the vast majority of students opportunities to take the AP classes they want.

FOLLOWING THE lead of schools throughout the nation, Mayfield High School in Las Cruces, New Mexico, recently restructured its curriculum and adopted a block schedule. Now in our sixth year of the new schedule, we are able to document our success. Failure rates and discipline referrals are down, and standardized test scores, including our Advanced Placement (AP) test scores, have improved. Although the changes at Mayfield have affected the entire curriculum, our focus here will be on changes in the AP program in a block schedule.

Before we address the specifics of the AP program, though, we offer a brief description of the Mayfield block schedule. Mayfield adopted what is known as a "2X4" schedule, in which students take eight classes each school year. The schedule allows students to take four classes per semester; faculty members teach three classes and have one planning period. Classes are 87 minutes long, and the entire school of nearly 2,300 students has a single common lunch period between the second and third blocks.

During the 1994-95 school year, when we were planning the details of our new schedule, many concerns were raised regarding how the change would affect the education of our students. Some of the most serious concerns had to do with the AP program. This was particularly evident at parent meetings, where the questioning was most intense on issues dealing with AP classes. Although AP students constitute a small percentage of the students at Mayfield, the staff felt that the questions raised at these meetings needed to be addressed, or we would not be able to convince some of our most vocal and active parents of the wisdom of restructuring.

Some Problems

Clearly, the new schedule posed a number of problems for the AP classes. First, there was the loss of contact time with students. Under the old schedule, students were in class for as much as 152 hours per credit (53-minute classes for 172 days). Under the new schedule, they spend 125 hours in class for each credit (87-minute classes for 86 days).

This loss of 27 hours presented a problem for some teachers, who felt that they would not be able to cover as much material. The philosophy of block scheduling, however, dictates that, while students may not "cover" as much as they might in the traditional schedule, the material that is covered can be taught - and learned -- more effectively. Teachers who taught under a block schedule told us, "You may not get from A to Z, but you will get from A to Y, and the students will learn it better." As one teacher so wisely put it, "The amount of material covered is not

necessarily equal to the amount of material learned."

These statements had the ring of truth for most of our faculty members and students. Teachers have always conducted classes in which not every chapter of a textbook is covered. One would have a hard time arguing that it would be a threat to the republic if a U.S. history teacher decided not to present a lesson on, say, the Webster-Ashburton Treaty. Indeed, many successful adults and dedicated U.S. citizens probably know nothing about this treaty. It is more important that students learn both concepts and academic skills in the process of covering whatever content is deemed relevant.

However, for AP teachers, this loss of contact time presents a serious dilemma. Since students are tested on their knowledge of U.S. history, information that may seem trivial to the general student population can be vital to students who wish to pass an AP test. The Webster-Ashburton Treaty may turn up on the AP test, and a teacher who leaves it out of the curriculum will reduce the chances of his or her students' passing the test. AP teachers hold themselves accountable to their students, and each AP teacher feels compelled to do his or her best to prepare students fully for the test.

Second, the College Board schedules AP tests in early May. Thus, in a block schedule, students who take an AP class during the fall semester have several months prior to the AP test without any scheduled classes in that subject. What's more, for those who take an AP class in the spring, the curriculum needs to be completed two or three weeks before the end of the school year, thereby reducing the amount of instructional time still further. Mayfield AP teachers were understandably worried that the block schedule might cause test scores to decline.

Third, it can be difficult to fit AP classes into the schedules of busy students. Under a block schedule, students can take only four classes at a time, and those who want to take several AP classes might not be able to take as many as they could have under the old schedule of six periods. To accommodate the needs of our top academic students, we had to work out a way of scheduling classes that would allow them to take as many AP classes as they desired. The students and their parents would accept nothing less than our best efforts on this important issue.

Finally, AP students are often the leaders in elective classes and co-curricular activities such as band, choir, orchestra, the high school newspaper and yearbook, clubs, and athletics. Mayfield has strong fine arts and athletic programs, and we had to figure out a way to schedule AP classes without harming activities in these areas. For the good of our students, we had to work out a schedule in which they would not have to choose between remaining in a music program and taking an AP class to prepare them for college.

The Mayfield Plan

After much discussion involving teachers, administrators, counselors, parents, and students, the staff at Mayfield restructured its AP program to address each of the problems described above.

1. AP classes are considered electives that demand a prerequisite. In subjects such as English, biology, and U.S. history, AP classes can no longer be used to meet a student's required credits for graduation. Instead, these subject departments now offer "honors" or "pre-AP" classes that provide the required credits. Students may then choose to take an AP class as an elective.

The classes taken as prerequisites stand on their own. For example, a student who takes "honors" U.S. history should not simply cover the first half of American history, with the last half left for the AP class to cover. Instead, the honors history class must be taught as if it were the only U.S. history class the students would be taking in high school, as indeed it might be. For students who then wish to continue their studies of U.S. history, the AP elective is offered to allow them to pursue historical topics in more depth.

There are three benefits to this plan. First, it allows us to more than make up for the loss of contact time in the new schedule. Students who complete the AP program in a single subject now spend as much as 249 hours (two block classes: 87 minutes for 172 days) in class rather than the 152 hours under the old six-period schedule.. Second, it allows students to "test the waters" and determine whether they are really suited to an AP class in a particular subject. Third, it allows teachers to follow up the required curriculum with a class that goes well beyond what students might normally study in an AP program. Thus it raises the standards in an already rigorous AP curriculum.

2. AP classes should be scheduled during the spring semester only. Although scheduling AP classes only in the spring semester makes it more difficult for students to fit these classes into their schedules, the May AP testing

date makes this restriction necessary. At Mayfield, we made accommodations in the first two years and have offered one AP section of U.S. history in the fall semester. Those students who enrolled in the fall semester class were asked to attend several weeks of evening review sessions in the spring. Although it was possible to prepare students for the AP test in these review sessions, they placed an added burden on busy students, for they required much time away from homework and other activities.

Surveys conducted by the College Board several years ago caused that body to consider offering AP tests late in the fall semester. Unfortunately, the College Board still has not accommodated block scheduled schools. Needless to say, the AP teachers at Mayfield strongly believe that this change should be made. If some AP tests are administered in December or January, our scheduling problems will be greatly reduced.

3. Students who want to take numerous AP classes are advised to plan ahead and divide their AP classes between the 11th and 12th grades. At Mayfield, we advise students to take AP biology and AP U.S. history in the junior year, leaving AP calculus, AP English, and AP physics for the senior year. In addition, we ask students to choose such classes as AP chemistry and AP German in either the junior or senior year. Through careful planning, students can fit almost every AP class they want to take into the second semester of their junior and senior years. Of course, some students might not be able to take every single class they desire, but this was also true in our old six-period schedule. Ultimately, there may be no perfect solution to this problem. However, we have given the overwhelming majority of our AP students the opportunity to take the classes they want.

4. The AP program should have a coordinator to work out scheduling conflicts. As we pointed out above, many of our best academic students are also among our best musicians and athletes. Accordingly, it is essential that the AP calculus class not be scheduled at the same time as, say, the orchestra period. At Mayfield, two AP teachers work together to create a schedule that seeks to reduce such conflicts. By using preregistration rolls, they cross-reference every student who has signed up for AP classes with the students who have signed up for elective classes. Accordingly, if a large number of students sign up for band and AP calculus, these two classes will not be scheduled at the same time. If enough students sign up for AP English to justify offering two sections, then one of the sections can be scheduled at the same time as a popular elective, such as choir. The other section would then be scheduled during another period so that choir students can take AP English.

Although this is a complicated process, we have completed it successfully for the last five years and have had great success in reducing scheduling conflicts. Above all, our band and choir directors and our athletic coaches have supported the plan, for it allows them to keep their most talented performers. What's more, the number of scheduling conflicts for AP students is now lower than it was under our old six-- period schedule.

Our initial questions and concerns about the AP program under a 2X4 block schedule have been alleviated over the last five years. We have now collected data that show that the restructuring of our AP program has been successful.¹ The overall pass rate (3 or better) on our AP exams has increased by 33%, while the overall number of students taking AP tests is up 37%. In short, we have more students in our AP program and more students passing the AP tests. Here are some figures we've collected.

* In U.S. history, the number of students scoring 3 or higher is up 110%; the number taking the exam has doubled.

* In biology, the number of students scoring 3 or higher is up 42%; the number taking the exam is up 67%.

* In both levels of calculus offered, the number of students scoring 3 or higher is up 71 %; the number of students taking the exam is up 21%.

* In English, the number of students scoring 3 or higher remained constant; the number of students taking the exam remained constant.

* In German, the number of students scoring 3 or higher is up 100%; the number of students taking the exam is up 125%.

Admittedly, these numbers do not tell the full story. However, many of the concerns and fears expressed when we embarked on our schedule change have been eased. Not only do the statistics of the first five years show that we have not hurt the AP program at Mayfield, they indicate that we have actually enhanced it. Only time will tell if the long-term results are as impressive.

[Footnote]

1. Statistics are based on yearly averages for the three years preceding the implementation of the block (1993-95) versus the first five years on the block (1995-2000).

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