

**HEREFORD WORKS:
Dr. Dance's Scheduling Mandate is a Risk without Reason or Reward**

I. HEREFORD WORKS

Right now, Hereford High School is a remarkable showcase for student academic success and personal development.

HHS is ranked by US News & World Reports as the 426th best high school in the United States out of over 21,000 high schools ranked. HHS ranks even higher (232nd) for STEM. See U.S. News & World Report Ranking, attached as Page 3. An astounding 56% of the student body takes one or more Advanced Placement courses during their time at HHS. Id.

Sixty four percent of HHS students are in the Gifted and Talented program, which comprises a 20% increase in participation from middle school. See Baltimore County School Profile for both HHS and Hereford Middle School at Pages 5 and 12. One hundred percent (100%) of HHS students meet graduation requirements. See Baltimore County School Profile for HHS at Page 9.

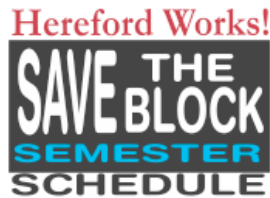
While there are certainly many factors that contribute to this success, as more fully discussed below, a significant factor has been the immersive and highly focused nature of teaching provided by the 4x4 block semester schedule. This schedule has been the cornerstone of HHS' academic accomplishments for the last twenty years.

II. WHY HEREFORD WORKS WITH THE 4X4 BLOCK SEMESTER SCHEDULE

A. The Immersive 4x4 Block Semester Schedule

The 4x4 Block Semester Schedule is a scheduling system whereby four (4) classes are taught in 80 minute blocks over a semester, which mimics a semester college course schedule.¹ The next semester, an additional four classes are then taught, thus providing an 8 course year and giving rise to the 4x4 semester block schedule name. Thus, the 4x4 Semester Block Schedule organizes the day into fewer, but longer, class periods.

¹ Advanced Placement classes are taught for 80 minutes per day or every other day over the entire year, depending on the course.



This scheduling system was explained in depth by Del. Wade Kach during his testimony before this Board on December 17, 2013. Del. Kach's testimony can be watched by clicking or visiting here: <http://vimeo.com/83499579>

B. Why the Immersive 4x4 Block Schedule Works for All Students

The 4x4 Semester Block Schedule provides the benefits of an immersive, in-depth academic experience for its students. Students avoid the stress from the inherent complexity of dealing with 8 classes and 8 teachers per week and instead can focus only on four courses during the semester. See February 24, 2014 Letter to Baltimore Sun by John Bereska (the principal at HHS for 12 years, now retired) attached as Page 15. You can also discuss Mr. Bereska's experience by contacting him directly at 410-925-4272.

Similarly, teachers under an alternative schedule have to work with twice as many students, providing less opportunity for meaningful interaction and, as necessary, academic intervention.

In addition, Hereford is well known for its enrichment program, which consists of a 30 minute enrichment period each day where students can get support from teachers for difficult classes or attend clubs, honor societies, and community service organizations.

This is a substantial factor when considering competing block schedule because under the 4x4 Semester Block system, there are only four classes each week that compete for the 150 minutes of enrichment each week.

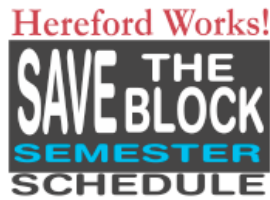
Under any other system, including the one proposed by Dr. Dance, eight classes would now compete for this same limited enrichment time, hindering academics.

Not only will academics suffer if more classes are taught each week, club participation will also suffer. In this regard, HHS covers a 200 square mile area of Baltimore County with a widely dispersed student body. Given the wide geographic dispersal of students and the extended length of time it takes to get to and from school, unable to obtain both academic and club enrichment during school, students will likely simply drop club participation.

These unique enrichment and geographic factors must be considered when proposing scheduling changes at HHS.

C. Why the Immersive 4x4 Semester Block Schedule Works for Tier 1 Students

Under the 4x4 Semester Block Schedule, Tier 1 students are able to "double up" on early STEM and language courses, permitting them to take more advanced (AP) courses in later years.



For instance, as a result of taking both Algebra II and Geometry in 9th grade, a student is able to take both Calculus AB and Calculus BC, which would otherwise not be available in later years. Also, this allows the same student to take AP computer science in 12th grade as a result of being able to take Calculus AB in 11th grade.

Moreover, the immersive nature of the 4x4 Semester Block Schedule readily prepares HHS students for college. HHS parent Dr. Greg Guyton testified before this Board on December 17, 2013, suggesting: “How do you prepare for success at the college level? The answer is simple. You mimic it.” Click or visit here to watch his testimony: <http://vimeo.com/83505233>

This fact is not lost on Ivy League schools. Ms. Diane Dietle, an interviewer for Harvard University, has noted how HHS’ 4x4 Semester Block Schedule has led to an impressive and statistically significant amount of interviewees coming out of HHS. See email from Ms. Diane Dietle to Ms. Connie Wittich, dated January 23, 2014, attached as page 17.

D. Why the Immersive 4x4 Semester Block Schedule Works for Tier 2 Students

Likewise, Tier 2 students also benefit greatly from a 4x4 system. Specifically, a Tier 2 student struggling with a course in middle school or high school is able to take a review course (especially Algebra) and still accelerate to AP Calculus by his senior year. This is explained by Educator in “The 4x4 Plan” (attached at Page 19):

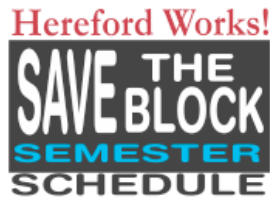
Students also gain time to acquire the prerequisite skills to succeed in a rigorous high school program of study. A sophomore, for example, still has time to complete the traditional algebra 1, algebra 2/trigonometry, geometry, pre-calculus, and calculus sequence. In a worst case scenario, a junior still has time to earn four credits each in English, math, laboratory sciences, and social studies.

Under any other schedule, such advancement is not possible. This Tier 2 acceleration ability is certainly a contributing factor to HHS’ remarkable 56% AP participation rate.

E. Why the Immersive 4x4 Semester Block Schedule Works for Tier 3 Students

Critically, the 4x4 Semester Block Schedule not only supports college bound students, but also provides support for Tier 3 students. In this regard, Tier 3 students are relieved from the onerous organization and psychological burden of 8 separate classes a week. They are also provided with additional time in enrichment for assistance with difficult classes.

Also, a student that fails a class is able to take a credit recovery course in one semester and get back on track with his peers the following semester. This is highlighted by “The 4x4 Plan” article attached at Page 19 which explains how:



For example, a student who fails freshman English at the end of 9th grade can repeat it in the fall and rejoin his or her classmates in English 10 the following spring. Seniors who fail a required class in the fall may even be able to retake the class in the spring.

One of the S3 reports obtained by Dr. Dance highlights this benefit. In its Bell Evaluation Report, S3 noted that a 4x4 Semester Block Schedule is “the only schedule that allows Tier 1 students to advance to the highest level academics while still supporting the needs of Tier 3 students.” See S3 Bell Schedule Evaluation, at page 15, attached as Page 38.

Parents of HHS have also testified to the dramatic benefits of a 4x4 Semester for their Tier 3 students. Watch Maggie Hird’s and Heather Matricciani’s Board testimony here: <http://vimeo.com/86868114> and <http://vimeo.com/84177312>.

F. Numerous Studies Tout the Benefits of 4x4 Semester Block Scheduling

Numerous studies also tout the benefits of 4x4 Semester block scheduling. In a 1997 study, Eineder and Bishop studied the effects of block scheduling at Philo High School in Philo, OH. Eineder and Bishop found that average GPAs increased significantly with this system (Eineder & Bishop 1997, p.47). They also found that the number of students achieving honor roll status improved significantly. Id. Indeed, the number of students achieving honor roll status doubled with the implementation of 4x4 Scheduling.

Another study (Strader, 2001) found similar effects in 101 schools in Missouri. Schools implementing the 4x4 block system found an increase in As and Bs with attendant decreases in Ds and Fs.

Another comparison of the 4x4 Semester Block System and the AB System was made in “The Effects of Block Scheduling on High School Academic Achievement” by Lewis, Dugan, Winokur and Cobb (2005). This study compared students’ test performance at one traditionally scheduled high school, one A/B scheduled high school, and one 4x4 scheduled high school operating in the same school division.

The Lewis Dugan study used performance on a ninth-grade assessment and an eleventh-grade assessment to calculate gain scores and found that students at the traditionally scheduled high school and the A/B scheduled high school experienced declines over time in reading and mathematics, while students at the 4x4 scheduled high school evidenced increases in both content areas. “The Effects of Block Scheduling on High School Academic Achievement by Lewis, Dugan, Winokur and Cobb (2005), attached at Page 48.



G. Numerous Schools Are Moving Toward, not away from, a 4x4 Semester Block Schedule

Admittedly, there are some studies suggesting that the 4x4 and AB block schedules do not work for every school. Nevertheless, given 4x4's proven benefit in a substantial number of schools and at HHS, it is not surprising that many schools are moving towards – not away from – a 4x4 Semester Block Schedule. As but one example, in 2010, the York County, Virginia School system switched from an AB Block system to HHS' 4x4 schedule after an extensive study. The York County School Board's considered research and explanation for its switch is more fully explained at this link (www.tinyurl.com/lryfqcm) and by searching the term "block" at www.yorkcountyschools.org.

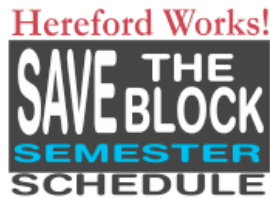
Similarly, the Alden County, New York Board of Education is considering actually switching back to the 4x4 semester system from the AB system, noting that "statistics... kept over the years show that students perform better under [the 4x4 system]. See Article attached at Page 65. Better yet, contact Principal Kevin Ryan directly at 716-937-9116 or kryan@aldenschools.org to discuss his experience moving from the 4x4 Semester system to the AB system and his desire to move back to 4x4.

Dr. Nancy Hubbard also testified before this Board regarding the benefits and the overall movement by global educators towards the 4x4 Semester Block, which can be watched by clicking or visiting this link: <http://vimeo.com/90750172>

Closer to home, after a study period, Harford County implemented a policy to permit individual schools within its District to adopt a 4x4 Semester Block Schedule. See letter Dr. Ensor's email to Kathleen Causey dated March 24, 2014, attached at Page 15. Likewise, Carroll County is set to adopt the 4x4 Block Schedule.

Likewise, Anne Arundel County teachers were so overwhelmed by the 8 course class schedule mandated by an AB Schedule that a task force recommended that the School System change to a 4x4 Schedule in 2005. "Schools May Drop Block Schedule: Workload Is Excessive, Teachers Say," Daniel de Vise, Washington Post Staff Writer, December 22, 2005, downloaded on March 31, 2014, attached as page 69.

Given the academic successes seen with the 4x4 Semester Block Schedule, perhaps it is no surprise that "[the most popular method of block scheduling is the 4 x 4 semester plan." See Lewis, C. W., Cobb, R.B., et al., at page 72, attached at page 49 (emphasis added).



III. DR. DANCE’S ARBITRARY AND CAPRICIOUS MANDATE ELIMINATING THE 4X4 SEMESTER BLOCK

A. The Change

Weeks after taking the Superintendent position in July 2012, Dr. Dance contracted with S3 to prepare recommendations regarding the schedules in the school system.

Purportedly based on S3’s “recommendations,” Dr. Dance proposed to modify HHS’ 4x4 Semester system to an AB System. Yet, directly contrary to Dr. Dance’s report to this Board, nowhere in any report prepared by S3, did S3 recommend any change to HHS’ schedule.²

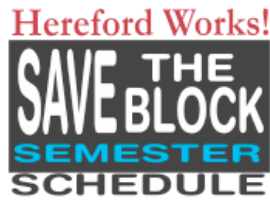
Indeed, two separate parents of HHS students contacted S3 to discuss why Dr. Dance was implementing the change at HHS. When asked about the change, Dawn De Zan, co-writer of the report, was surprised by the change and stated that there was no recommendation or intention by S3 to change HHS’ successful 4x4 Semester Block Schedule. See Affidavit of Connie Wittich and Affidavit of Connie Taylor, attached at pages 75 and 77.

Moreover, Dr. Dance cites student mobility from the S3 Report as the primary factor for his sweeping change at HHS, suggesting that “a major mobility issue is our students moving among our schools.” See Dr. Dance’s Superintendent’s Report to the Baltimore County Board of Education November 5, 2013, at 1, “Master Scheduling.”

Yet, on March 21, Dr. Dance has conceded that the mobility rate of 5% he relied on for his decision was in fact less than 1%. See Dr. Dance March 21 letter to Hereford Works attached as page 79. Dr. Dance’s earlier higher mobility rate included mobility codes for death, pregnancy, jail, transfers during the summer, and transfers out of BCPS. See Mobility Codes attached as pages 80 and 81. However, the only mobility “code” that supports the schedule change would be a transfer within BCPS during the school year: all other mobility factors do not benefit from a schedule change.

Indeed, it is Hereford Works’ understanding there were zero students at HHS who transferred within the BCPS system during the 2012-2013 school year study period. While this

² In Dr. Dance’s See Superintendent’s Report to the Baltimore County Board of Education November 5, 2013, at 1, “Master Scheduling,” attached at page 72, Dr. Dance erroneously states that based on S3’s “findings and recommendations,” he was moving HHS to a compatible 8-course bell schedule.



number is excruciatingly difficult to verify because of a deliberate lack of access, even if one student transferred during the school year, this would only equate to .07%, less than one-tenth of a percent. This rate is nowhere near the five percent mobility rate relied upon by Dr. Dance to support the need for his sweeping proposal.

Given that the primary reason for Dr. Dance's decision – a 5% mobility rate – is no longer supportable, a review of every other reason for the proposed change is now necessary to determine if the reasons and rewards outweigh the risks.

Ultimately, this Board has to balance the potential risks and rewards of the schedule change and determine whether the potential for gain outweighs the potential for loss. This Board has to ask "Does the proposed schedule change meet Hereford's needs, given its unique characteristics? Will Hereford better meet its goals and objectives as a result of the change?"

A balance of those risks and rewards set forth below strongly suggests that the change does not meet Hereford's needs nor will better meet its goals and objectives.

B. What is an 8 course AB System?

Instead of taking 8 courses a day, the AB system lengthens the class time to 80 minutes a day with classes alternating on A days and B days. In turn, students take four classes one day and four classes the next, for eight classes a week all year long.

C. The Myths and Truths Behind Dr. Dance's Mandate

Myth #1: The proposed AB Schedule maximizes curriculum options

Truth #1: The AB schedule Limits the curriculum Options

First, HHS has already eliminated several electives because of the proposed change. This is a direct result of shifting teachers to teaching a class for the entire year instead of teaching a class only for a semester.

Second and more significantly, the choices of both Tier 1 (advanced) and Tier 3 (needing additional support) students are limited by AB Schedule.

Under the 4x4 Semester Block Schedule, Tier 1 students are able to "double up" on early STEM and language courses, permitting them to take more advanced (AP) courses in later years. Without a Semester Block Schedule, the availability of AP courses for Tier 1 students becomes limited because of a lack of pre-requisite fulfillment. Simply stated, under a 4x4 semester system, "Tier-1 students have the ability to accelerate through the general requirements and get to more rigorous academic subjects sooner." See page 15 of the S3 Bell Schedule Evaluation Report, attached at page 38.



Similarly, under the 4x4 Semester System, a Tier 3 student who fails a class is able to take a credit recovery course in one semester and then get back on track with his peers the following semester. Again, in later years that Tier 3 student has more course options available to him.

Myth #2: An AB schedule increases curriculum continuity for high-mobility students

Truth #2: Mobility is a Non-Issue

In his report recommending his changes to HHS' schedule, he states "I have come to understand that a major mobility issue is our students moving among our schools." Superintendent's Report dated November 5, 2013 attached at Page 72.

Admittedly, "the requirements of scheduling and staffing within a highly mobile environment lead to inefficient utilization of resources." S3 Findings and Recommendations, page 42, attached at page 126. However, Hereford does not suffer from such inefficiencies that would necessitate the sweeping changes recommended by the superintendent.

As discussed earlier, Dr. Dance's decision to implement an AB Schedule was based on a 5% mobility rate – 60 students a year -- at HHS. See Dr. Dance's letter dated February 24, 2014 to Wendy Flowers, attached at page 150.

However, upon a careful review of that data such as is required for such the sweeping change proposed, the mobility rate of benefiting students at HHS is less than 1/10 of a percent if not zero. The detriment to the remaining student population does not justify any change.

Myth #3: An AB schedule supports magnet programs

Truth #3: Magnet Programs are a non-issue at HHS

HHS does not have a magnet program and this does not justify any change.

Myth #4: An AB schedule improves staff utilization

Truth #4: The AB Schedule has no Effect on Staff Utilization at HHS

Because HHS is already on an 8-course yearly schedule, there are no staff utilization benefits. In Dr. Dance's letter dated February 24, 2014 to Wendy Flowers, attached at page 150, Dr. Dance specifically stated "unless enrollment changes, there will not be a reduction in staff."

Myth #5: An AB Schedule provides flexibility to Accelerate Courses

Truth #5: The AB Schedule provides no such flexibility to HHS' 1400 students



In response to parents and students concerns that they would no longer be able to “double up” math and language courses over a year, Dr. Dance suggests that “the principal has the flexibility to work with individual students to allow them this flexibility.” See Dr. Dance’s letter dated February 24, 2014 to Wendy Flowers, attached at page 150.

How students would be able to double up on cumulative courses under an AB schedule is beyond explanation. For instance, how can a ninth grader possibly double up on language-- Spanish II and Spanish III – or on math – Algebra Review and Algebra I -- when both would be taught over the course of one year? Alternatively, how can a student pick up four years of a third language their Junior year under a year system, as some students currently do under the current 4x4 Block System.

The benefits of being able to double-up under a 4x4 system are explained by Clarence Edwards, Curriculum Coordinator of Orange County, Virginia Schools, where he glowingly calls the 4x4 program “High School With a Year of College” because of its ability to provide students flexibility in what they learn. See The 4x4 Plan, attached at Page 19.

Myth #6: With the change, HHS students will still succeed

Truth #6: Given the Risks and Downsides, “still succeed” is not a justifiable reason

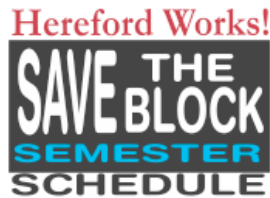
Many parents have been told that notwithstanding the change, HHS students will be just fine given their socio- economic advantages.

The suggestion that such sweeping changes will not detrimentally impact students is not a reason for – and cannot be used to justify – a change in a system with proven success. In any event, as discussed *supra*, such glib suggestions are not borne out by academic studies on the subject matter.

Moreover, HHS is not – as proponents of the change believe – a socio-economically advantaged school. HHS has a diverse socio- economic population spread across 200 rural square miles of the county. It is unjust to assume that every one of HHS students is advantaged and will still have the tools to succeed under a new schedule. HHS’ neighborhood is served by two full time food banks and “My Neighbors Foundation” which helps hundreds of struggling families in North County every year.

Further, testimony and research have shown Tier 2 and Tier 3 students, regardless of their economic standing, will be negatively impacted by this mandate. See e.g., Vicki Lucas <http://vimeo.com/84311342> and Heather Matricciani <http://vimeo.com/84177312> testimonies.

Myth #7: The AB Schedule is Recommended by the S3 Study



Truth #7: There was No Such Recommendation made by S3. The 4x4 Semester Schedule is also Supported by the S3 Study and is the “Most Popular” Semester Plan

In the study, “The Effects of Block Scheduling on High School Academic Achievement” by Lewis, Dugan, Winokur and Cobb, the research revealed that students in a 4x4 Semester Block Scheduling had greater gain scores in reading and mathematics than did students in both traditional scheduling and A/B block Scheduling. See study attached at Page 49.

Given the academic successes seen with the 4x4 Semester Block Schedule, perhaps it is no surprise that “[the most popular method of block scheduling is the 4 x 4 semester plan....” See Lewis, C. W., Cobb, R.B., et al. at page 48 (emphasis added).

As discussed *supra*, several school systems that have tried the AB System are now moving back to the 4x4 schedule.

Myth #8: There is Support for the change to an AB Schedule

Truth #8: The Stakeholder parents, students and taxpayers do not support the Change

The following groups, comprising of 50,000 voices have asked for a delay in the mandate because they believe a high school schedule and its implementation is paramount to a school’s success. These groups include CASE, TABCO, PTSA Council of Baltimore County, PTSA Hereford High School, and Hereford High School Student Voice Club. See Letter to Dr. Dance, March 4, 2014 attached as Page 153.

While reference has been made to the BCPS Student Council’s vote for the BCPS high school schedule change mandate, Hereford Works cannot locate the meeting minutes or any documentation on this Student Council Vote. BCPS administration has told us that there were no notes taken to document the meeting or the vote.

Of course, it would not be a surprise for the Student Council to approve the change given the misleading information submitted to them to consider, which has now proven substantially inaccurate.

On the other hand, over 1,700 students, parents, alumni and taxpayers with a stake in HHS have since signed a petition protesting Dr. Dance’s mandate. Similarly, the HHS PTA voted an astounding 256-1 against Dr. Dance’s mandate.

Myth #9: Credit Recovery Options will be available under an AB Schedule

Truth #9: Few meaningful credit recovery options will be available



When a student fails a course in a yearlong AB course cycle, that student must wait until the next year to retake the course, thus falling behind his peers.

Under a 4x4 system, the student can immediately retake the course and catch up with his peers the following semester. This is explained by Educator Edwards in “The 4x4 Plan”:

For example, a student who fails freshman English at the end of 9th grade can repeat it in the fall and rejoin his or her classmates in English 10 the following spring. Seniors who fail a required class in the fall may even be able to retake the class in the spring.

See attachment at Page 19.

Myth #10: If the Superintendent and Board ignore this problem, it will go away

Truth #10: If the Superintendent and Board ignore this problem....

The reasons for Dr. Dance’s sweeping change at HHS have never been adequately justified or explained. Given the recent computational discrepancy in the mobility rate relied upon to justify the change, it is time for this Board to demand more of its Superintendent when making such heavily opposed changes.

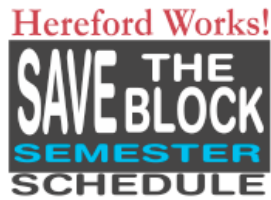
It is not enough for the Board Members to continue to suggest that this strongly opposed change in the 4x4 schedule proposed by Dr. Dance is an unreviewable “administrative decision, as it has in the past. This Board is charged with the responsibility to review Dr. Dance’s decision under Section 4-101, “Control and Promotion of Education,” of the Education Article of the Maryland Code, which provides: “educational matters that affect the counties shall be under the control of a county board of education in each county.”

More significantly, that Section provides that “[each county board shall seek in every way to promote the interests of the schools under its jurisdiction.”

Over the past twenty years, HHS has developed a nationally recognized academic and STEM program, which is now jeopardized.

North County residents do not intend to sit by idly if this matter is not resolved favorably and the interests of HHS are not adequately promoted by the Board. Right now, Hereford Works has scheduled a fund-raiser on April 7 to support its efforts to save the Block Schedule and continue to raise awareness of its efforts. Ticket sales have been brisk.

Hereford Works has also met with County Council Persons Marks, Huff, Oliver, Quirk and Bevins, who support Hereford Works’ efforts to bring a resolution to this matter. Hereford Works



has scheduled meetings with several more Council Persons over the next week as well to gather additional support as well.

As Board Members, each of you has an obligation to our students, our parents and the taxpayers to ensure that any decision affecting educational matters at HHS is thoughtfully considered, reflects the wishes of the taxpayers and stakeholders, is based on accurate information, is not made arbitrarily and capriciously and does not jeopardize our students' education.

Hereford Works is hopeful that this Board and Dr. Dance will carefully consider the information provided by this White Paper as well as the considerable and growing opposition to this change and make a decision to leave the 4x4 Semester Block Schedule in place.