

STATE BOARD OF EDUCATION HIGH SCHOOL REFORM LOCK HAVEN UNIVERSITY - ULMER BUILDING LOCK HAVEN FRIDAY, MARCH 6, 2009 FRIDAY, MARCH 13, 2009 10 00 A M

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PUBLIC HEARING ON HIGH SCHOOL REFORM

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PA State Board of Education Lock Haven, PA March 6, 2009

Testimony by Robert Pangborn Vice President and Dean for Undergraduate Education and Professor of Engineering Mechanics The Pennsylvania State University

Members of the Board --- I appreciate the opportunity to speak to you today on the topic of high school reform.

I bring a perspective shaped by my 30 years at Penn State University, comprising 15 years on the faculty in the College of Engineering and another 15 administering to admissions, enrollment management and undergraduate education at the campus, college and university levels.

At Penn State we have over 90,000 students, including almost 80,000 undergraduates enrolled at 21 campuses throughout the Commonwealth. We are keenly aware of the need for strong, coordinated commitments by both the K-12 and higher education communities to prepare our young people for the challenges of the global workforce of the 21st century. As previously communicated in a letter to the Board last May, we believe that initiatives to insure that high school students learn and can demonstrate basic competencies in core areas prior to graduation represent sound public policy. Students who leave high school without such a foundation will face a steep climb to postsecondary success and face daunting challenges if they enter the workforce directly.

My testimony will touch on the following factors that I've had the opportunity to see at close hand:

--The preparedness of entering students to address college-level work and what this portends in regard to prospective students' potential for success.

--The experience we have with student placement in key undergraduate courses, and the advantage that could be realized by early intervention to remedy identified deficiencies.

-- Current trends in college student performance and persistence, especially in the STEM disciplines, in relation to the content and rigor of their educational track.

The extant trend of increasing undergraduate applications attests to the current, highly competitive admissions environment at Penn State. Over 30% more applications have been received for the summer/fall 2009 admissions cohort compared to the same date of 4 years ago. Historically, the high school cumulative GPA has shown a strong correlation to subsequent first-year college performance, and thus the admissions criterion at Penn State is based primarily on this measure of high school

academic work. To be meaningful, however, this measure must be representative of a rigorous high school curriculum and aligned with college entrance requirements composed of sufficient high school units in English, Math, Laboratory Science, Arts/Humanities/Social Sciences, and Foreign Language. Potential for successful college study in the STEM and liberal arts/professional fields is further evaluated using math and verbal scores, respectively, on entrance examinations such as the SAT or ACT, including more recently, the writing component. Long experience has shown that an algorithm that gives additional consideration for high school work completed at an advanced level is a strong predictor of first-year college success. In addition to advanced secondary-level curricula, this is manifested in several ways at Penn State. Enrollment of high school students in their junior and senior years in credit courses at Penn State campuses has more than doubled in the last two years to over 1,300 students and over 5,500 – almost a third – of the first year students beginning study at Penn State in 2008 transferred in over 57,000 college course and advanced placement credits.

All of the above speak to the importance and viability of encouraging mastery in key subject and skill areas to the greatest extent possible prior to enrollment in college, and of providing alternative paths to accomplish this objective. Multiple options for assessment that aid in ascertaining that high school courses, grades and other academic experiences measure up to consistent, international standards and academic intensity would further improve the ability to accurately project and ensure student academic potential and success. Likewise, accepting alternatives such as proficient performance on advanced placement examinations will avoid the imposition of redundant measures for those already demonstrating the propensity to excel.

Following their admission to college, additional evidence of our nearly 17,000 first-year students' preparedness for college work is furnished by in-house placement tests in mathematics, English and chemistry. Studies of the placement test outcomes, conducted in conjunction with a fairly recent transition from paper to web-based administration of the tests, verified that all four math subscores (basic math, algebra I, algebra II and trigonometry) as well as the total score were positively and significantly correlated with math SAT scores. The scores defining placement into the various levels of college or precollege course work in all the tested subject areas are reevaluated periodically by content experts and reset as needed. While the need for remediation constitutes only 2% of overall student credit hours university-wide, up to 10% of students typically require some attention to pre-college math, and 25% need at least one course in pre-college English composition. Rates for associate degree students are higher. Performance in college-level courses subsequent to remediation is good, with over 80% earning satisfactory or better grades in English and 60% doing satisfactory or better work in entry-level college math.

These data point to the need for good diagnostic evaluations administered early enough to remedy identified deficiencies before students enter college. The recently released study by the Penn State research team of Sperling and Kulikowich on the validity of local assessments of mathematics and reading proficiency revealed considerable variation in both their alignment with academic standards and the practices used to establish proficiency.

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The impact of deficient preparation is disproportionately felt in the STEM disciplines, for which leakage of students from the pipeline occurs steadily throughout high school and into the early years of college. When students fail to stay on track in the math sequence needed for engineering and science disciplines, they face significant hurdles in catching up, need to spend much longer in foundational studies and often transfer out of these disciplines all together. Although students who start their studies at University Park in science or engineering graduate at rates above 80% as do their undergraduate peers in other fields, only a half to two-thirds complete degrees in these majors, with the remainder transferring into other academic colleges. Our nation can ill-afford this loss of talent.

In summary, it is paramount that curricular rigor and academic intensity be assured in high school. A variety of measures are needed to give students a target – a body of knowledge and standards for the competencies to be mastered. Careful research needs to be done to identify the characteristics of local assessments or other GCAs that can be used to reliably measure alignment and proficiency. New subject-area requirements for graduation should reinforce the development of communication, critical thinking and collaborative problem-solving skills needed in today's world and workforce to enhance students' access to college and vocational preparation. Follow-up studies will be needed to directly correlate the results of the assessments to real college and career success.

Thank you very much.



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Thomas Paternostro Distinguished Educator

Testimony on Pending Graduation Testing

Good morning! My name is Thomas Paternostro. I thank you for the opportunity to offer testimony on the issue before us, at this critical time in our history. In order to establish a degree of credibility in what I am about to state, my educational experiences become relevant.

In September 1964, I walked into my fourth grade classroom and was introduced by the principal to the 34 children assigned to me that first year. Over the decades since then, I have been fortunate to have served as principal, superintendent for almost two decades, child advocate, supervisor of student teachers at one of our state universities, program manager for an Industrial Resource center for work force skill development, and currently as a distinguished educator, but most importantly with one single mission, "to make sure that children are our highest priority". I was called to present testimony before a select committee of the US Senate prior to the adoption of the National School to Work Opportunities Act.

I am one hundred percent supportive of the proposed Graduation Competency Assessments. I will spare a repeat of all the data, studies, and statistics that are real and readily available and speak from the trenches of public education, "where the children are". I do not understand the rationale of school leaders who resist the opportunity to improve their schools through effective evaluation of their student's competency prior to graduation. The data is a powerful tool that will provide linkage to the root causes that contribute to system failure, ultimately leading to changes aligned to demands of the world beyond high school. May I provide a very recent example? My wife of 44 years is a registered nurse. She is moving toward retirement later this year. In January, she was scheduled, as is the case every two years, to be tested on her knowledge and skills for advanced cardiac life support. I observed her for better than a month studying every night, preparing for this examination and hands on performance. She had no options but to pass this test, if she wished to stay employed.

If you are in a hospital, and experienced a cardiac incident, would you expect those who care for you to be competent? Failure is not an option! Should we expect less of our students who will go into the workforce, and be expected to compete universally?

In my judgment, we must change the current model of our secondary school delivery system, which is antiquated in organization, operation and delivery. We must move toward a system that is in sync with the demands of the world beyond the school and one that fits the learning styles of today's students especially through the use of technology. Our students today, for the most part, are being taught, exactly as they were when I first entered the profession. We must incorporate a model where both the curriculum and teaching methods are relevant. Students must be taught how to apply skills. It is time for every teacher and principal to incorporate 21st century skills for all students, in all teaching.

The current administration of our commonwealth has provided the necessary leadership and tools, through standard aligned systems, clearly defined eligible content, assessment models, training and support. When these systems are implemented by every school, in every classroom, every day, we will prepare our students well for any Graduation Assessments and they will succeed. Accountability through testing prior to graduation will unify curriculum across the commonwealth for all students, independent of their location. Time does not permit details, however, I can share the stories of many youngsters who I have known, that were labeled as failures, as disruptive, and worst of all "without ability" by their schools, and have, with interventions, as briefly indicated above, graduated from their high schools and college, and today are productive members of our workforce.

Resisting competency testing is a smokescreen for resisting change. What more evidence do we need in our commonwealth when we look carefully at the data, especially the number of dropouts, or as I prefer, "push outs". When I hear opposition because of potential cost, I ask you to "cost out" for all of us, the cost of school failure on the lives of youngsters we serve, on yearly prison tuition, on future family instability, on lost production for the American economy, and in our long term national defense.

Finally, I recall the days decades ago when the first report of our "Nation at Risk" was released. I was alarmed! Since then, there have been many additional reports with dire warnings concerning our future and secondary school reform. Time is running out, we must act now.

I appeal to this board to take bold action. The time for tinkering has ended. Making sure our graduates are competent, and holding schools accountable when they are not, is a necessary step, first in the lives of our youngsters and for the future of our country.

With these and other measures, the possibilities are unlimited. In our post 9/11 world, the dots linking our public schools to our economy and the future of our nation must be connected.

Thank Yor

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March 6, 2009

To: The Pennsylvania State Board of Education

From: Dr. G. Brian Toth

Re: Assessments

Pride - Tradition Excellence

Good Morning. My name is Dr. G. Brian Toth, Superintendent of Schools for the Bellwood-Antis School District. Thank you for allowing me to testify this morning. The Bellwood-Antis School District is located 8 miles north of Altoona and 30 miles south of State College. We have about 1400 students in 3 schools.

Why is assessing student progress important?

Useful data comes from meaningful assessments. The systematic use of data to improve teaching and learning requires leadership, training, and the development of a culture of use. Michael Fullan (2006) indicates that schools must first focus on achievement through leadership to turn schools around. Michael Schmoker (1999) says that schools need to focus on quality and quantitatively measure the results of the methods employed (Fullan, 2006) to ensure accountability. NCLB requires all educational endeavors to be research based and quantifiable.

However, Robert Marzano (2003) discusses that in the new era of school reform, those working with education must realize that reform is highly customized. In other words, what is working and good for one school might be different for another school. Schools are unique to their students, parents and community. Thus, reform efforts need to meet the unique needs of the clientele. Secondly, Marzano (2003) indicates that school reform today will need to rely heavily on data. Data is needed to identify the effectiveness of any intervention.

Dilemma: How do we assess all students in relation to one set of standards? As you already know, Penn State University researchers found that just 18 of the 418 district alternate assessments examined effectively gauged students' proficiency in reading and math.

Why these findings? Learning cannot be legislated. We work with human beings and one size does not fit all. Therefore, alternatives and alternatives to alternatives need created. Although 95% plus of Bellwood-Antis students will pass the PSSA, we have students for which that 'remedy' has no impact. Sometimes we need to assess what a student was capable of learning not what the majority of students can learn.



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Web Homepage tuckahoe.blwd.k12.pa.us. I view the newly proposed Keystone Exams as a potential viable data source that if administered at the end of a course and scored quickly can provide information to assist students in their needs, whether that is remediation or acceleration. Waiting for an 11th grade PSSA score, is too long to meet the needs of our students. Providing that the Keystones are valid (testing what is taught) and districts are supported financially to provide remediation, as needed by students, Keystones certainly can provide timely, meaningful and reliable data to educators. Additionally, the Standard's Aligned Systems should provide us with the road map upon which we need focus instruction. However, do not forget the special conditions of our IEP students. I ask that their needs be addressed with the Keystone Exams as well.

As Superintendent of the Bellwood-Antis School District, I can tell you that when available, I will recommend that we use the Keystone Exams as an assessment method for our graduates. Also, I am at this time volunteering the Bellwood-Antis School District to work with PDE to "pilot" the upcoming Keystone Exams.

Bellwood-Antis is no stranger to reform that focuses on student achievement. In fact, the Bellwood-Antis Middle School participated as one of 16 schools in the Pennsylvania Achievement Gap Effort (PAGE1). This effort was supported by the PA State Board of Education and we thank you for that opportunity.

One of our most critical PAGE1 initiatives was to administer our own quarterly benchmark assessments (this was prior to the host of ready-made benchmark assessments) to provide meaningful student learning data, providing performance reports to teachers within days and help teachers align and re-align and re-align curricula via mapping to the Pennsylvania assessment anchors and eligible content to meet student needs.

Bellwood-Antis is also no stranger to high school reform. At Bellwood, we have successfully implemented a rigorous high school curriculum. Through our partnerships with PDE, the University of Pennsylvania, Foundations, Inc. and the Annenberg Foundation, and through the PA High School Coaching Initiative, we have been able to create an intensive staff development program K-12 that includes Instructional Coaching and also changes instruction by employing the student engagement and literacy strategies of the Pennsylvania Literacy Network, as well as, using data to identify student needs. Additionally, through our partnerships with higher education, we offer about 70 dual enrollment credits on our campus and provide a course rigor that enables students to be collegiate or workforce ready. These programs, partnerships and reform efforts have kept Bellwood-Antis continually changing and moving forward for the success of our



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Web Homepage tuckahoe.blwd.k12.pa.us. students. In fact, our strategic plan mission statement is "Success is the Only Option."

Change is "Continuous Improvement," says Peter Senge (2000). In Pennsylvania changes have already occurred in academic standards, strategic/school improvement planning and curriculum. An emphasis on state standards has continued, including curricular support through the development of assessment anchors and eligible content in areas of reading, math, and science, as well as, the development of the Standards Aligned Systems model. These and other improvements must continue in order for us to be internationally competitive.

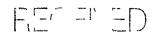
In today's world, neither school district nor school within a district is exempt from the following question: What achievement are we seeing in our own schools?

Yet, the key to reforms or any other efforts on studying student achievement is to identify positive influences that increase student achievement. As an end result, these best practices must be used to help all students to achieve.

All districts have to have the vision and patience to sustain achievement efforts and we have to realize that student achievement efforts are not just a two or threeyear project but a long-term commitment to achieving and sustaining the success of all students in our schools.

Thank you.





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Dean B. Girton

President

Girton Manufacturing Co., Inc Millville PA 17846

For

PUBLIC HEARING ON HIGH SCHOOL REFORM

to

Pennsylvania State Board of Education

March 6, 2009

Good morning. My name is Dean Girton. I am the President of Girton Manufacturing Co. in Millville, Columbia Co.. We are a manufacturer of cleaning equipment for the pharmaceutical, food and research industries, selling internationally. Sales last year were 12 million dollars. The company shipped 27% of its products out of the country. Girton currently employs 96 full time employees in jobs as diverse as Electronics Engineer, Computer programmer, Stainless highpurity Welder, and as typical as janitor, press operator, and mechanic.

The business is 82 years old. My father started with one employee building milk bottle washers for farmers in Pennsylvania. At the time, my father, with a high school education, was the engineer, the accountant, the trainer, the salesman, and the janitor. The employee was a high school graduate with no experience in manufacturing. Dad taught him to weld, to paint, and to assemble the machine. Schools in 1927 were teaching reading, writing and arithmetic. Skills were taught on the job.

As the business grew, more highly trained employees were needed. An accountant and an engineer were added to the growing workforce. When I came to work in the early 60's, the company had grown to 230 employees. Two were engineers. One accountant. Six sales persons. Eight clerical employees. Five supervisors and the remainder were production line employees. The sales dollars that year was one tenth of the current turnover.

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My job was to maintain the workforce. Finding qualified employees required relying on some screening tools. The easiest was requesting a copy of the high school diploma. There were 46 in my high school gradating class that had been reduced from the 72 that started in the seventh grade. Having a diploma had real meaning. I used that as the first cut to divide candidates into pools. A lack of a diploma did not automatically cause rejection, but it determined what position an individual would start in the shop. The diploma was earned by proving competents in the basic 3R's and the willingness to come to school regularly.

Businesses change. Ours has. Today the workforce is much more skilled than in 1960. It is also better paid. It requires fewer individuals because of the advanced skills and the new technology. The clerical staff that hand-posted records or later used a typewriter to keep the business on track has been replace with individuals that use the latest computers, interconnected to the entire operation. The ability to use the software that facilitates their success requires at least a strong background in English, math, use of information and teamwork. These skills can and should be taught in the secondary system.

The welder that my father taught used a "buzz-box" that had one knob to adjust for the various jobs required. Today we expect high school grads to understand the relationship between volts, amps and arc penetration not because they were taught it in school, but because in we assume they have the math skills to understand their

job requirements after a short period of training. Some do. We have no idea when the school system sends us a "HIGH SCHOOL GRADUATE WITH DIPLOMA" if these skills exist. Do you want to hire this individual without further testing on basic grade school skills?

Our staff today is primarily "white collar". In 1960 "white collar" meant the clerks and supervisors in the office. Today they are in the office and throughout the remaining areas of the company. The welder is using a \$32,000 machine to complete one weld that must be documented on the computer on the shop floor. Which will then be inspected by a high school grad that is using the same devise that your doctor uses for a colonoscopy and costs \$ 28,000.

The electricians are mostly 2-year degreed kids. They are typically wiring a machine that will sell for \$ 210,000 to \$ 460,000. It will have 3 to 5 computers in the control system on the machine. They will be required to spend 2 weeks of reading documentation understanding the logic of the software and then certifying to the federal Food and Drug Administration that the washer meets all USA standards. Or 20 % of the time some international standard.

Half of our engineering staff has a two-year degree; the others are four-year grads. We have twelve in the department. All graduated from a high school where the proof of their proficiency was proven in the advanced degree. ,

However, many of the basic skills that our employees now use have been taught on the job as they came with deficiencies in their basic education.

Today, when we are screening to fill a new position, we do not ask for a copy of the diploma, apparently everyone gets one. It has lost it meaning to employers as a tool to qualify job seekers. This is not a criticism of the education that many school systems provide to their graduates. Many secondary school grads have a rudimentary knowledge of the 3R's. But it is impossible to tell this from the fact that they possess a diploma. Even a transcript is difficult to understand, as school systems have no standards for courses. Course titles vary, preventing intelligent decisions about what a grade means even if a transcript review is made.

Studies show that many high school grads are not able to begin college level work without remediation. This is such a waste of the family and public resources. Beyond our company's interest, we as taxpayers must voice our concern at the waste of public monies when we are paying to educate our populous and receive a poor return on the investment.

Some testing programs for basic academic skills are available in the area. We have used WORKKEYS for some positions. My question to the state board is "why do I, as an employer, need to test high school grads to determine if they have learned the skills that they should have received in school?"

In discussions with my peers, this problem always comes up. There is broad agreement that the diploma has lost its value. Because local school systems are proud of their schools, local pressure by employers has been rebuffed. The consensus is that the state will be required to adopt a policy of requiring a standardized graduation certification. It most be rigorous and cover the basic skills required to succeed after graduation. If the standard can not be met by the student, remediation must be required to assure that every graduate receiving a diploma as proven that its was earned.

We at Girton believe that the state must now mandate graduation competencies testing on a standardized basis for all high school students. Whether a student is going to go directly into the workforce or purse further education, a minimum standard must be set for all.

I want to thank you for allowing me to express my deep concerns about the future workforce that I will be hiring tomorrow. Please help.

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✓ Testimony of C. Alan Walker President & Chief Executive Officer Bradford Energy Company, Inc., Bigler, PA 16825

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Commonwealth of Pennsylvania 272 102 11 9: 24 Board of Education Public Hearing on High School Reform 277 10 10 10 Lock Haven, PA March 6, 2009

My name is C. Alan walker. I'm President and Chief Executive Officer of Bradford Energy Company, inc., which operates in Clearfield County. During my 35 years of heading Bradford Energy Company, Inc., I have marketed metallurgical coal mined in Clearfield County in 25 different countries, so I have broad experience in international business and the 21st century challenge of preparing our students for global competition.

I am also a big supporter of education in general and public schools in particular. My family has had four generations of graduates from Clearfield area high school starting with my 97 year old father who graduated in 1931. We have used our public school education as the foundation for our continued education, and the expectations are that each family member will at the very least earn a master's degree. We recognize education is the key to success in our economy.

We have also invested heavily in providing educational opportunities for students from Clearfield County. In 1984, our family established a scholarship at Bucknell University for graduates of any of the eight high schools in Clearfield County. In the 25 years since the scholarship was established, 150 students from Clearfield County have attended and graduated from Bucknell under this program. In addition, our family foundation provides twenty scholarships annually to students from Bradford Township, Clearfield County who wish to attend college, professional, or trade schools. Our goal is to reward students for their academic work in high school and help provide them with access to higher level education that will allow them to achieve at their maximum level. The program has been highly successful and of the 150 students to graduate from Bucknell, twelve are currently medical doctors or students in medical school.

Now to our concerns about the public schools in Pennsylvania: attitudes about education are developed in the home, but once students enter the public schools, the actual education received is determined by the teachers. Information must be presented in some form for students to learn and master it. This requires a huge commitment and a great deal of energy on the part of the teacher. We all know there are good teachers and bad teachers and everyone in this room can mention one or more teachers who have influenced and changed their lives along their educational journey.

However; we see a slippage in the quality of education students are receiving based on the recent graduates we've hired in our organization. Much more remedial work and supplemental training is required than 20 years ago, and it's in the basics. For example, a secretary we hired who came with a good recommendation from her teachers did not know the state abbreviations used by the post office. While she could use spell check, she had never learned synonyms such as their, there and they're or to, too and two, so that every letter she typed had to be proof read before it was mailed out. This was a huge waste of time for the other people in the office. Also, it's very rare we find a student today who knows how to use fractions. In our business which still uses traditional weights and measures, it's critical to know how to multiply and divide by fractions. This is the most basic math we use. Our employees must also understand the difference between metric weights and the traditional English system as most international business uses metric. This is usually something we have to teach new employees.

The problem is accountability within the educational system. Once a teacher achieves tenure, there's very little review. Also, there's virtually no reward for superior performance. The result is a slide toward mediocrity which is not good for education. Combine this with grade inflation and the idea that failing students is bad for their self esteem and you have an extremely negative outcome.

Employers, who hire students for the workforce, no longer, have any idea what a high school diploma really means. That's why I support raising high school graduation requirements and proficiency testing as a measure of what students really know. This may require teachers to "teach to the test" as they say, but if it's information students should know anyway, is that so bad? I don't care how many words a minute a student can text, but I do want to know they understand basic grammar of the English language, have the math skills that a high school graduate should have and possess a desire to learn. This is the key to the student for future opportunity.

My international business has required me to do a great deal of overseas traveling. I'm constantly amazed at the quality of education in these countries. Once third world countries have really closed the gap with the U.S. On education and given access to resources, they can now do just about anything we can do here, and they do it well. Maybe it's because they've recently been lifted out of poverty that they really appreciate what they have, so in most of these countries I see a real commitment to excellence and to the future. They want to be players in the world and the world economy.

My long term goal isn't necessarily continued domination of the world economy by the U.S., but I do want to see us be able to maintain our standard of living and be able to defend our borders. The key to our future goes right back to education and how we prepare our students to learn and grow in the new world economy. The sooner we set higher standards for our teachers and students, the greater our chances of being competitive in the future world economy. Like it or not, it's vital to our survival in a turbulent world. We can do it if we have the will to do it.

Unfortunately, there are some who will oppose these changes who may be afraid of change or of greater accountability. However; in my view, the status quo is unacceptable. The proposed regulatory changes represent a major opportunity to restore meaning to high school diplomas in Pennsylvania and ensure that the graduates who receive these diplomas are academically well prepared for the promising future that waits. We have a moral obligation to the next generation to give them the best education possible. It's the best legacy we can leave for future generations of Pennsylvanians.