

**Redesigning The American High School**  
**NGA Center For Best Practices Honor States Grant Program**

**Proposal From Indiana**  
**From Middle School Algebra To A Science, Technology, Engineering and Math-Ready Graduate**

**Our Two-Year Plan**

In the past, learning was acceptable as a passive activity for the mass of students; teachers could combine reading assignments, classroom instruction and lectures and let students respond; students were graded against internal standards and plotted to a bell curve without jeopardizing their future life prospects; teachers could teach without need for interactive relationships with their students, ongoing enhancement of their subject knowledge and improvement of their practice, or obligation to connect their students' work in school with their aspirations in life. Not any more.

In today's world, as technology contributes inexorably to the productivity demanded by financial and intellectual capital to justify investment; as use of technology is exploding and climbing its way up the functional ladder in virtually all aspects of work and is embedded in virtually every occupation; as the computer and its relatives inside machines constantly push human work to higher orders of thought; as information moves at light speed, communication is ubiquitously enabled and work can be done by anyone from anywhere for anyone anywhere else; as knowledge increases exponentially many times over within the span of a teacher's career – in today's world, it is beyond dispute that the education level required to seize the opportunities and meet the challenges of these developments is rising.

Careers using effective education in Science, Technology or Engineering, all derived from Mathematics (steM), now reach many sectors of strength in Indiana – advanced manufacturing, advanced agriculture, life sciences and health care, logistics services, information technology, financial services, even motor sports and construction. From research laboratories to the manufacturing plant floor, logistics service centers to health care facilities, vehicle maintenance shops to the farm, some combination of steM learning provides the necessary prerequisites for many of the jobs in our future as a state. Create steM-prepared graduates, and they, and their communities, are ready for the 21<sup>st</sup> Century economy.

The high school graduate today needs both the rock and the reach, the foundation of a rigorous education that creates rather than limits career and life options and the opportunity to see the rich array of possibilities that can be achieved with that foundation in hand. Yet our current high school environments are oriented, and to at least some extent our current steM teachers have been trained, to teach post-World War II lecture generation students, when our students are now of the digital millennial generation; and to prepare only some students for post-secondary education, when all students need that preparation today.

In this context, steM education is a particularly critical enabler for students and communities for whom our culture previously understood a minimal education was adequate. To cut them off from the education that enables their future is economically contrary to logic – it precludes their later participation in the bulk of the employment opportunities – and is morally indefensible – it drives down their earning potential.

The answer is not to create one size fits all education. The answer – and the core of this proposal – is to create a broader set of school environments across the state, each embraced by the community as aligned to its quality of life aspirations; each with a steM foundation that broadens career options for students and enables economic development strategies for communities; and each with a faculty with mastery in their subject matter and an ability and willingness to come out from behind the desk and engage their interactive digital millennial generation students.

## Goals

We choose in this initiative to work on a vertical path from middle school Mathematics through college success in steM curriculum. Our goals reflect that. Over the next two years we will: (1) Facilitate the selection and initial phases of implementation of new high school designs that are nationally recognized, either proven or in acceptable experimentation, and predict to success in steM courses in higher education and work in life; (2) Bring every middle school Mathematics teacher to mastery of teaching Algebra I & II to digital millennial generation students such that the students master it as well as see it as the foundation of fundamental knowledge for steM courses in high school and beyond; and (3) Establish and have results from communities of practice, supported by effective closed loop feedback and open loop collaboration, among post-secondary and high school faculties in steM, so that high school faculty see and deliver the student learning needed for success in post-secondary work.

With these initiatives in place, we expect that over a 10-year period this new capacity ultimately will

- Bring communities and their schools into alignment, with the schools' educational expectations, practices and results matching the communities' economic development and quality of life strategies and aspirations;
- Increase the number of new high school designs in play in the state, whether in redesigned existing environments or new charter or other schools, and across the entire spectrum of public, private and parochial schools, such that in excess of 50% of our high schools in the state will reflect such steM-preparing designs;
- Increase the number of middle school students taking Algebra I to in excess of 90% of the students;
- Reduce our dropout rates to under 10% and increase our graduation rates to at least 90%;
- Bring our high school students to readiness for success in later work and life, through a passing rate of such readiness assessments of at least 90%;
- Increase the number of students who successfully complete their chosen post-secondary education to at least 80% within the appropriate four or two year measuring period;
- Increase the number of steM-related majors and minors in post-secondary institutions, such that the steM-related employers in the state can look with confidence to the state's educational system as the source for their future workforce needs and such students can look with confidence at the state's steM-related employers as a source of future employment opportunity; and
- Present an overall educational system that is more aligned to the realities of a steM-driven economy and world and has the systems to produce and manage data, adjust and improve practice, and report and validate results.

## Current Results and Challenges

Indiana's performance in Mathematics, the gateway to steM learning and work, while not embarrassing when compared to the range of states, falls far short of what is needed to educate current and coming generations of students for productive work in the steM occupations:

- Our NAEP scores confirm that only some one-third of our 8<sup>th</sup> grade students are proficient in Mathematics;
- Scores from our high school Algebra I end-of-course assessments suggest that only some one-fifth of such students are demonstrating proficiency in the course material;
- Our Math SAT scores have remained effectively stagnant and are at a level well below that which predicts success in post-secondary courses or training; and
- Our ACT scores confirm that barely half of those students taking the exam may be expected to succeed in freshman Algebra in post-secondary education, and less than one-third in biology.

We take no comfort in norm-referenced comparisons that may put us among other states. We take particular concern in the inverse of our students' performance: from one-half (ACT) to two-thirds (NAEP) to four-fifths (end of course assessments) of our students are performing below levels needed for the foundation of successful entry into a steM occupation. That gets our attention, as it should. Our two-year plan seeks to begin to reverse such numbers.

Indiana faces a particular mix of challenges in the path from Mathematics to success in steM courses:

- Our high schools do not yet reflect an adequate array of models that provide line of sight connections for students to possible future steM occupations, offer students engagement in the applied work of the discipline, and ensure curricular content that prepares the student for success in Mathematics, engineering, technology or science after matriculation to post-secondary learning environments.
- We have a deficit of middle school teachers who are themselves educated to teach algebra, as a subject and to today's inter-active, digital millennial generation students.
- We have limited attention to the loop between preparation, induction and continued learning of high school steM teachers and their students' success or failure in post-secondary environments.

### Strategies

We seek to broaden Indiana's steM-based high school learning environments and to enable them by teachers whose mastery is subject matter specific – they know their content – and whose pedagogy is generation specific – they know their students. To that end, we are pursuing these specific strategies:

**Our high schools will be encouraged to embrace new educational models that ensure steM success.  
Our entering high school students will have mastered Algebra and be ready for steM courses.  
Our high school steM teachers will learn from post-secondary institutions as to student success.**

We reject the notion that today's students are disinterested in or incapable of success in Mathematics or in the steM subjects it enables. (We have no evidence that students cannot learn steM; we have ample evidence that without effective teaching and perceived relevance to their futures students do not learn them.) We embrace the notion that as students master Algebra in middle school and connect Mathematics to the vast array of steM careers in high school their active minds will lead many of them further into, not turn them away from, possibilities unrecognizable to them without that Mathematics foundation. We assume the obligation to take Mathematics and steM to today's students on their terms, within their highly interactive minds, in their digital generation contexts.

### **Strategy Element 1**

**Our high schools will be encouraged to embrace new educational models that ensure steM success**

We do not attempt to pick winners among the employers who provide opportunity to our citizens; rather we seek to provide the optimal conditions for their success here. Given the context described above, one of those optimal conditions must be a work force ready to execute the work of globally competitive, technology driven, knowledge based employers. Those employers' needs are our citizens' opportunities.

We have many employers in Indiana – arguably the vast majority – whose work is in advanced manufacturing, logistics services, advanced agriculture, the life sciences or comparable industries where an educational path through steM is useful and often essential for success. As a manufacturing intensive state, we see up close and personal the impact of rising requirements. The high school diploma of the past is no longer sufficient education to gain access to the production line of that globally competitive employer, who now needs, and therefore requires, at least two years of education – generally steM education – beyond high school.

We have Core 40, which creates the rock of the steM foundation courses – including in mathematics and science – needed to prepare the student for success after high school. But we lack the reach – the environment that meets the digital millennial generation students on their own terms and connects their interests to their mastery of steM content, gives them the result of both the rigor and resiliency they will need and the relevance and relationship they want. We have isolated examples of effort to produce such a result, in individual schools, but no statewide expectation or opportunity.

We need to change that. To do so, we intend to build on efforts already underway and take their core approach statewide. For example: in Lafayette, Jefferson High School now offers career academies that enable students to match their interests with courses within and on top of the Core 40 curriculum to build a path to their future studies and work. In Indianapolis, with the help of the Center for Excellence in Leadership of Learning at the University of Indianapolis, the five high schools in the Indianapolis Public Schools are becoming 21 small high schools, each selecting a unique school design from among proven and innovative school models developing across the country, and Decatur Township has created its own charter high school specifically to challenge students to achieve in the sciences. In Evansville, the Signature School provides internships and other opportunities for its students to connect post-secondary contexts to their current subjects. Throughout the state charter schools are entering the realm of high schools. Ivy Tech, IUPUI and other post-secondary schools are working with high schools on early college models. Some of these have steM approaches and implications, but not enough. All of these efforts collectively have some impact, but it is not what it could or should be.

Building on the efforts of such individual schools and developing initiatives that are bringing to the state exposure to both proven and experimental models that predict to success in steM, these thoughts guide us to these basic actions within Strategy Element 1:

- We will use Indiana-based and national expertise to build a broad and deep menu of high school designs, none of which will be restricted to specific structure or content but all of which will align to success in steM studies and occupations after high school.
- We will inform the selection and use of such models with input from the state’s employers and the economic development leaders of our communities to our high schools and our colleges and universities, to ensure that they meet the needs of students for success in post-secondary environments, enable leadership and faculty to see first hand the educational value added through their use, and align educational practice to the economic development and quality of life aspirations and plans of the communities.
- We will educate mayors, economic and workforce development officials, and business and community leaders across the state – community-by-community – in the relevance and opportunity embedded in such designs.
- We will challenge, in a constructive way, the leadership of districts and their high schools, their faculties and teacher representatives, to consider and adopt one or more of these designs for schools.
- We will promote such designs throughout the state, provide technical assistance and support to their adoption, in whatever context, and form and support communities of practice among the adopting schools and their communities.
- We will work at the local school, state agency, legislative and federal levels to eliminate the barriers to success of such new school designs imposed by restrictions, obligations, policies and procedures that do not add value to, or drain resources from, the focused education provided by such designs.
- We will work with district and school leaders and with the representatives of educators to drive resources to the point of learning in such schools and to facilitate development of other capacity – for example, in technology, virtual learning or professional development – to support their efforts. Our objective will be to help establish effective professional development during school redesign.

- We will track and report the results of such schools that do adopt these steM-aligned designs, as to student results while in the schools and thereafter, and compare them to the results of any schools that choose not to adopt such a design.

This will not be restrictive work, fitting local aspirations into rigid models. It will not create steM-only schools, or preclude schools from offering additional opportunities in, for example, the arts. We do not expect that all schools immediately will leap to steM designs or models, and some may never do so. This will be enabling work, building the capacity of local communities and schools to embrace and implement high school designs of their choosing, from nationally recognized models and sources, with only the requirement that the design predict to supporting steM success in post-secondary education and careers.

## **Strategy Element 2**

### **Our entering high school students will have mastered Algebra and be ready for steM courses**

The path to a steM-enabling education begins with Mathematics. Our freshmen are not prepared for the steM-enabling high school Math courses. We have identified a deficit of middle school teachers with mastery in teaching Algebra, a root cause and a fact too critical to ignore. Its roots lie in the cumulative effect of decades in which students could, and many did, find their way through high school with Algebra, or perhaps Geometry, as their capstone course in Mathematics. They could because the work of the day did not require further Mathematics for the majority of adults. They could work in the occupations of the times – manufacturing, agriculture, transportation, services, even management – with not much more than the mathematics of a checkbook and savings account. The vast middle of the bell curve did not need much more than Algebra in high school and thus did not need Algebra in middle school. We did not need middle school teachers to teach Algebra to the masses, and so many did not prepare to do so.

We were prepared for the ebb, and we now have the flow. The bell curve in middle school Mathematics has become the J curve, because now every high school student needs at least three years of Mathematics, and every middle school student needs Algebra. Now, just as every high school Math teacher should have both subject matter mastery and the ability to bring digital millennial generation students to success as well, every middle school needs teachers with mastery of that subject matter for those students.

At the state level, we have no clarity how many of our experienced middle school faculty have mastered the subject matter through Algebra II and are teaching it effectively to digital millennial generation students. Our knowledge curve is upside down – students know which of our teachers is effective and which is not, but as a state we lack such knowledge. One critical task is to create line of sight visibility of each of our middle school Mathematics teachers' mastery or lack of mastery in teaching Algebra.

Many of such teachers have that mastery, and beyond. But too many of them lack it. And their individual capacity deficits add up to ours as a state. It is not the fault of such teachers that they have not mastered the teaching of Algebra. We have not asked them to. We will now.

Even for those with mastery of the subject matter there is the question of their understanding of their students – the active, diverse digital millennial generation student. We share with the country the clash of lecture generation teachers and digital millennial generation students. Absent a fresh approach by the teachers, it is not a productive encounter.

Lecture generation teachers may assume passive student minds, ready to memorize and regurgitate; the digital millennial generation student mind is highly interactive, ready even for rigor but only where there is engagement. The lecture generation teacher could assume student interest in the teacher's chosen subject; the digital millennial generation student is interested in that which is relevant to him. The lecture generation teacher would like to assume obedience without challenge; the digital millennial generation

student is more likely to give allegiance to that which does challenge her. And the lecture generation teacher probably assumes that his prior education provides possession of the superior mind; but what if, as we suspect, the digital millennial generation student – raised on digital food and engagement drink – has the mental capacity to be more active and resilient, to work at greater speed and complexity, to evaluate data more effectively and assimilate knowledge more usefully, to be more creative and innovative, but only when the student understands the relationship of the work to his or her life?

Hence mastery in teaching Algebra in middle school involves mastery of both the subject matter and the student. The subject matter demands more rigor; the student demands more relevant relationship; the teacher will need more resiliency; and the context requires results that provide the foundation for further learning, not just in mathematics but in the courses that grow from it – science, technology and engineering – that set the table for much of the employment opportunity today.

These thoughts guide us to these basic actions within Strategy Element 2, designed to ensure our high school freshmen are ready for steM classes in Mathematics and beyond:

- We will utilize independent national expertise to identify, and if need be build, an assessment tool that can inform individual middle school teachers and their school leaders where they stand in mastery of Algebra I and II and teaching Algebra to digital millennial generation students.
- We will ask the Mathematics departments and schools of education in the state's colleges and universities to come together to develop and deliver a common, focused statewide curriculum targeted specifically to bringing our current middle school Mathematics teachers up to such mastery.
- We will make such mastery, and if not proven taking the curriculum until such mastery is proven, a requirement for continued licensure to teach middle school Mathematics in Indiana.
- We will expect such teachers to assume the professional responsibility to upgrade their subject matter and pedagogical mastery on their own time.
- We will ask schools and communities, aided by local colleges and universities, to provide the content opportunities for such upgrades.
- We will track the process of such confirmed or developed mastery until all middle school Mathematics teachers have achieved it.
- We will ask our colleges and universities to use such curriculum and assessment in the preparation of future middle school teachers, confirmed by a warranty to schools and communities of the teacher's readiness to lead digital millennial generation students to master Algebra in middle school.
- We will track the achievement results, including but not limited to test scores, of our students while in middle school and longitudinally thereafter, to ascertain the impact of teacher mastery on students' mastery of Algebra in middle school and their interest and success in pursuing Mathematics and steM courses into and through their post-secondary education and careers.

### **Strategy Element 3**

#### **Our high school steM teachers will learn from post-secondary institutions as to student success**

School design supports but does not replace the need for educator mastery of the rigor of subject matter and the need for effective relationships with students. The steM teachers in today's high schools have need for the support of a professional community committed to their success.

Concentrating on Mathematics, the sciences and other steM-aligned courses, we will expand to statewide use and strengthen the effect of two programs already in existence here. The first, instituted by the Independent Colleges of Indiana, provides high schools with direct feedback on the subject matter successes and failures of their students in both public and private post-secondary education. IUPUI has provided similar and even deeper feedback to schools in Central Indiana. The second, instituted by some districts that are part of the Central Indiana Educational Services Center, provides direct subject matter

linkages between professors in higher education and teachers in high school. Post-secondary Mathematics, Science and English professors work with Mathematics, Science and English teachers in high school, providing a closed feedback loop that helps the high school teachers identify professional development needs to improve their students' success in post-secondary education. These vertical communities of practice strengthen the results provided by high schools to colleges and universities and thus employers and communities in the region.

Building on these initiatives and expanding them to steM-aligned courses statewide, we will undertake these actions within Strategy Element 3, stated here as basics only:

- We will encourage each college and university in the state (1) to provide and deepen the student performance data feedback to high schools who send them students; and (2) to have their subject matter faculties work with the subject area teachers of the high schools from whom they receive an adequately critical mass of students to identify useful, necessary or essential professional development to improve their results.
- We will ask our colleges and universities to provide leadership in developing communities of practice for their previous teacher graduates and current steM teachers in their region to ensure the pedagogy effective for digital millennial generation students, focusing first on high schools that choose to adopt a new design under Strategy 2.
- We will host regional and statewide subject area specific communities of practice in virtual and face-to-face efforts to identify common and effective practices.
- We will ask all colleges and universities to require a full major in any subject area, and particularly in steM-related areas, as a prerequisite to a teaching degree in that area, as a prelude to a state requirement for induction and certification that the high school teacher have a major in the subject area taught.
- We will track the achievement results, including but not limited to test scores, of our students while in high school and longitudinally thereafter, to ascertain the impact of teacher mastery on students' mastery of steM subjects in high school and their interest and success in pursuing steM courses into and through their post-secondary education and careers.
- We will begin to track student success in high school steM subjects (and middle school Algebra) back to the institution from which their teacher graduated, aligning higher education's desire for well-prepared students with higher education's effectiveness in educating the teachers who will prepare them.
- We will ask our universities to confirm by a warranty to schools and communities of the readiness of their future teacher graduates to lead digital millennial generation students to master steM subjects in high school, backing up the guarantee with further professional development by the university if needed.

### **Strategic Support** **We will build local community capacity**

We share with many states the inverted structures of the past, which are built for regulation and control, not capacity and performance. As we work ourselves out of such circumstances, we need to shift the state's role from detail manager to capacity support, from mother-may-I mentality to accountability for performance results. Superintendent of Public Instruction Dr. Reed has started this process with an organizational review of our Department of Education. The Legislature has continued the existence of the Government Efficiency Commission, which previously heard ample testimony of the need to focus on results and otherwise free up the environment for performance.

To ensure that these initial efforts – in high school design, in preparation for high school Math, and in performance feedback to high schools from colleges and universities – are embedded in communities:

- We will develop transitional capacity to work with business and community leaders whose high schools elect a new design to align the schools' efforts with the economic development, workforce development and quality of life strategies and aspirations of the community, consistent with the expectations of the globally competitive, technology driven and knowledge based economy.
- We will develop communication strategies – from traditional media to local gatherings – that will assist community leaders at that grassroots level in bringing the citizens to an effective level of understanding of and support for the high school redesign work.
- We will help local school and community leaders work through the process of redirecting resources to the classroom and other points of learning, within the reality that these efforts and the better results they will create must be undertaken within finite and even constrained resources.

**Strategic Accountability**  
**We will measure our results and learn from them**

- We will track student performance in steM-related subjects from high school through post-secondary environments and into employment, as a means to hold ourselves accountable and as a means to learn from results.
- We will host, and collect the input from, general and subject area specific discussions of the particular designs, strategies and practices that have impact on the performance of the digital millennial generation students, to help convert observations about such students to practices effective for them.
- We will provide communities with specific feedback on their students' performance and build their own capacity to do so in the future, so that our results – successes and needs for improvement – are visible not only at the state level but also more importantly within the community and its schools.
- We will use what we learn to inform state policies and practices.

<b>Budget</b>
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While we do not start from scratch here, we recognize clearly our need for external guidance, for a bank of resources to help individual teachers and collective school communities navigate the changes needed to yield student success from middle school Algebra to steM courses in higher education. We will allocate resources provided (estimated here at \$2 million plus our \$2 million match) as follows (Attachment B):

- Grant funds to enable DOE, communities and schools to access the external, independent, national expertise to support (1) the development of the assessment of mastery through Algebra II for teachers of digital millennial generation students; (2) the creation of the professional development curriculum for Mathematics teachers whose assessments indicate they need it; (3) technical assistance to communities in the selection and implementation of school designs; and (4) development and extension of the student results data bank in higher education that supports closed loop learning and open loop collaboration to improve high school students steM-related results.
- Matching funds and in-kind services to initiate specific vertical and horizontal communities of practice in steM subjects among high school steM faculty and the college steM faculty to whom they send students (they also will be used for mastery for middle school Math teachers who need it).
- Grant funds for development and implementation of statewide public service and media-driven messages in support of the high school redesign efforts and steM initiatives and coordination of community-specific grass roots efforts to align participating communities' schools who elect a design to their economic development, workforce development, and quality of life strategies and aspirations.
- Additional resources (which may also be counted as a match, if appropriate) may be drawn from community foundations (Indiana has one in each county) and would be drawn from colleges and

universities who elect to participate by using their legacy faculty assets to provide professional development for middle school Mathematics and high school steM teachers.

- Middle school and high school teachers are presumed to maintain a professional approach to the need to upgrade their subject matter knowledge and pedagogy to meet the needs of their students, and to do so on their own time, without need for further compensation.

The fiscal agent will be the Indiana State Budget Agency (Charles Schallioli, Budget Director).

### **Our Leadership Team**

We have the leadership resources in place to move this agenda. The offices of the Governor and Dr. Reed work together on strategy, policy and planning. Indiana's Education Roundtable provides the context for directional discussions, reporting and appropriate recommendations. Multiple resources already are active in the state, working in collaboration on such matters as school redesign, development of new school environments, chartering schools and informing effective practice. We have experience in tackling such matters at the state level, working together through disagreements and concerns, finding the paths forward for our communities and their students. We remain collectively dissatisfied and desirous of further improvement, itself a sign of an effective team.

Our American Diploma Project leadership team – David Shane (the Governor's Senior Advisor for Education and Employment); Dr. Suellen Reed (Superintendent of Public Instruction); Dr. Jo Ann Gora (President of Ball State University); and Dan Peterson (Vice-President of Cook Group, Inc.) – will be at the core of the leadership team here as well. Dr. Reed, an experienced career educator, is in her fourth term as Superintendent and co-chairs the Education Roundtable; Dr. Gora is an experienced higher education leader, and Ball State has led Indiana as the first university to require the college preparatory Core 40 curriculum for admission and has a developing program in community entrepreneurship; Mr. Peterson is an executive officer for a global life sciences company headquartered in Indiana, with employment needs that span from technologists on the manufacturing floor to scientists in the laboratory, and who is deeply involved in the K-12 schools in his community; Mr. Shane, who will serve as team leader, was on the Roundtable as a business leader and has over a decade of experience in multiple aspects of K-12 school reform and higher education. This work, and the strategies identified above, will be a standing agenda item for the Education Roundtable, which has by statute bipartisan membership from the Legislature.

The team will broaden over time as those leaders in the schools themselves, and in universities, industries and communities within the state, step forward to implement the strategies.

Letters of commitment from the chairs of the House and Senate Education Committees, the Superintendent, the Higher Education Commissioner, the Indiana Chamber and Cook Group are attached.

### **Our Current Status Under The Five Strategies Of The Action Agenda**

These strategies obviously are but part of our overall education agenda. Attachment A summarizes past action, future objectives and the current status of our activities under each of the five major *Action Agenda* strategies. We note that these remain in development: Governor Daniels was inaugurated in January 2005; the 2005 Legislature, which ended its session in late April, was active, achieving the first balanced budget in 10 years, enacting 73 of Governor Daniels' 83 legislative priorities and undertaking and accomplishing many other initiatives; the Governor and Dr. Reed are in the process of establishing the 2005 Education Roundtable; our Department of Education is presenting the 2005 Indiana High School Summit, focused on related strategies and practices, and but the start of our efforts; Dr. Reed is in the

process of assuming responsibility for the actions of the Indiana Professional Standards Board (previously an independent entity) and with it the opportunity to remake the principles, substance and processes for the preparation, induction and continued learning and certification of Indiana's teachers; she also has authorized a review of the Department of Education to ensure it is supportive of the student achievement efforts of all schools. For all these reasons and more, the forward high school reform agenda of the state is still in formulation, and will be guided in part by the ongoing efforts of those already at work bringing new models to our schools, the work of the 2005 Summit, and the state's leadership team for the American Diploma Project.

## Our Commitments

While our plans are still in formation, we are already prepared to make the following commitments:

1. **Performance Goals.** Results matter most, and without metrics results are not visible. We have been reminded recently, through the efforts of the Indianapolis Star, that our historically used formula for reporting woefully overstates graduation rates and understates dropout rates. In 2005-2006 we will begin to use our student testing identification numbers to track student persistence and will measure drop outs and report graduation rates based on persistence throughout high school. This will enable us to have the baseline data against which to measure improvement, for all socio-economic classifications of students. Exit interviews now required by statute prior to dropping out will provide further evidence of students' motivation and causes for non-persistence. Our 10-year assessment plan, in the early stages of development, will include both end-of-course assessments (ECAs) that will track college readiness and (perhaps through a collection of ECAs) an assessment that identifies to the student, his or her parents, colleges and employers the student's readiness for success in post-secondary learning and work. As all these come on line in the next years, we will use the baseline metrics data to set our goals, not just for 10 years out but also for the interim years that will enable a continuous improvement approach.
2. **Longitudinal Results.** We already have adopted by statute a longitudinal, 4-year cohort high school graduation measure to track individual students, and we will be pleased to use such data, or other that is needed, to permit valid comparisons among the states and, most importantly, valid identification of student progress in Indiana.
3. **Aligned P-16 Governance Structure.** We already have our Education Roundtable – on which business and community interests are by statute equally weighted to K-12 and higher education interests; and a developing P-16 Plan, which frames our policy discussion and provides the skeleton to which the muscle of efforts to redesign high schools, increase options for students, and ensure students are college and work ready may be attached.
4. **National Education Data Partnership Initiative.** We will participate, provide data and work with other committed states to illuminate the data, analyze the results for root causes and make mid-course adjustments in policy and practice warranted or necessitated by the results.
5. **Communications Plan.** We have been communicating about school reform – principally standards, assessments and accountability – for some time, with mixed results. We have used both mass communications on a virtually statewide basis and local communications at the grassroots level. We are close to, perhaps at, the starting line in communications about new models of high school on a statewide basis. The 2005 High School Summit is a start. We will build on that through subsequent efforts in the media and through other channels, although we note that it is in the communities where the essential communications must take place.

## Other Matters

**Readiness For Change.** Among the *Ten Steps*, Indiana has (1) had an Education Roundtable for many years; (2) legislated Core 40, our defined college and work preparatory curriculum, now to be required for graduation and admission to public 4-year colleges; (3) developed a basic P-16 framework for linking all activities to the objective of student success in post-secondary learning; (4) piloted end of course assessments in a few selected high school courses; (5) begun the process of articulation agreements among Ivy Tech (our community college), regional campuses of Indiana and Purdue Universities and the main campuses of all universities (the Legislature has mandated 72 courses be covered initially); (6) continued funding for AP courses and examinations; (7) clarified and strengthened legislative provisions for dual enrollment and dual credit scenarios; (8) used various literacy and math recovery programs but to no substantial continuing effect; (9) offered multiple retake opportunities and at least some student tutoring and other assistance for the GQE (which remains at the unacceptably low measurement of 9<sup>th</sup> grade knowledge and skill); and (10) developed certification courses in many high schools, most often in technology.

The 2005 Legislature, acting in concert with the Governor,

- Established the first balanced budget in ten years, restoring fiscal integrity to the state's finances, and even in that context provided modest additional funding for schools on average;
- Revised the state's school funding formula to move schools to per student funding, moved schools toward a single foundation amount for each student, and reaffirmed and strengthened the complexity factors that increase funding for schools whose student environments reflect more risk of academic difficulty;
- Strengthened options for students and their parents through elimination of barriers to student movement from school to school within and among districts;
- Eliminated caps on and various obstacles surrounding charter schools, mandated DOE to seek all available federal funds for charter schools, and created a fund of \$10 million for the biennium to match federal funds available for charter school facility financing;
- Mandated that the state's college preparatory Core 40 curriculum be the default curriculum for all high school students, be required for graduation, and be required for admission to the state's public four year institutions of higher education;
- Made it more difficult for students to drop out of high school by requiring an interview with the school principal and an explanation of the economic impact of such a decision;
- Clarified and strengthened the state's financing and policies concerning dual enrollment and dual credit practices;
- Continued funding targeted to gifted and talented students, Advanced Placement courses and exams, PSAT exams for students prior to their senior year, and Learn More, an awareness and guidance initiative targeted to getting more students into and through higher education; and
- Moved the Indiana Professional Standards Board under the Superintendent as an advisory body, allowing her the opportunity to remake the expectations, substantive requirements and processes of teacher preparation, induction and continued licensure to meet the needs of the current environment.

Efforts to move the drop out age to 18 and to expand student and parent options and support to move from failing schools were narrowly defeated.

Dr. Reed has authorized a review of the Department of Education's mission, organization and allocation of resources, through both participation in the Council of Chief State School Officers study and an independent review by the Crowe Chizek consulting firm. Resources of the Governor's Senior Advisor for Education and Employment, the State Budget Agency and the newly created Department of Government Efficiency are available to assist.

Many parties already have been working in Indiana on high school redesign and on linkages between student learning in high school, student success in post-secondary education and professional development for high school subject area teachers. For example:

- DOE will host on June 13 and 14 a High School Summit, intended to begin a statewide effort to redesign high schools, at which Kati Haycock, Bill Daggett, Neil Howe and Ioannis Miaoulis will be key presenters and in which many existing high school initiatives in Indiana will be reviewed;
- Many high schools across the state already have developed academies, pathways or other means to make learning more rigorous for students and more relevant to their futures;
- The Center for Excellence in Leadership of Learning has been working with the Indianapolis Public Schools to convert their five large high schools into 20 plus small schools, each hosting a unique high school redesign model selected from national and international models;
- Mayor Bart Peterson in Indianapolis and Ball State University across the state have chartered over new design schools, under nationally recognized standards and procedures for quality and accountability, many of which will grow into and some of which already are high schools;
- An initial collection of post-secondary institutions (Ivy Tech, IUPUI and the University of Indianapolis), local schools and charter authorizers have begun conversations with high schools and to meet to look at the variety of possibilities in early college high school models, building on the practices of many Indiana schools in dual credit and dual enrollment scenarios for individual students to make them available to a broader and deeper range of students and communities;
- The Independent Colleges of Indiana have managed a data base that provides feedback to each high school in Indiana from the colleges and universities in the state (public and private) to which it sends students as to how well the students perform in selected core subject areas; IUPUI has a similar approach for Central Indiana schools.
- The Central Indiana Educational Service Center has managed Project Seam, which uses direct professor-to-teacher subject area communities of practice to inform high school teachers' professional development by identifying where their students need improvement in English, Mathematics and Science to succeed in college.

Precisely because of Indiana's effort to balance the budget, and the multiple perspectives and learning driven by that effort, the state is in a useful position to implement high school redesign: in multiple ways across the state, districts and schools are facing the need to reallocate resources to the point of learning; they are confronting the need and the opportunity to redesign by changing the school, not by adding on; and they see clearly and feel directly the need to use visibly finite resources to improve results to meet higher needs and expectations. In similar vein, local communities are focusing more on aligning their expected educational outcomes with their economic development aspirations.

**Additional Considerations.** Indiana historically has been a frequent participant with NGA and particularly has worked in concert with Achieve to benchmark standards and assessments; as part of the first five states in the research phase of the American Diploma Project; and now as part of the action phase of ADP as well. Governor Daniels, who was inaugurated in January 2005, attended the NGA meeting in late February. David Shane, his Senior Advisor for Education and Employment, attended the NGA High School Summit (Governor Daniels was attending to legislative activity), has consulted as asked with NGA and Achieve staff, and is leading the second phase of the ADP work with Dr. Reed. Indiana had all perspectives – a college president, a state business leader, the Superintendent and the Governor's Senior Advisor for Education and Employment, participating in the ADP conferences and at the ADP strategy session last week.