



2009 TOWN HALL

FINDINGS & RECOMMENDATIONS REPORT

GETTING READY FOR WORK EDUCATION SYSTEMS & FUTURE WORKFORCE

EMBASSY SUITES CONFERENCE CENTER
NORMAN, OKLAHOMA

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INTRODUCTION

The subject of the 2009 Town Hall is “Getting Ready for Work: Education Systems and Future Workforce.”

This is a timely conference, situated at the 9th anniversary of the Oklahoma Academy’s 2001 Town Hall, which contemplated Oklahoma’s status in the global economy. In retrospect, it is clear there remains a considerable task in seeing that Oklahomans reach the prosperity goals sought ten years ago. At that time, Oklahoma was still striving to break away from its traditional commodity-based economy. Rankings such as the overall New Economy Index – where we ranked 43rd out of 50 states in 2008 – reveal that progress is slow in coming.

This conference is timely for another reason. 2009 was a turbulent year in the world economy, shaking our faith in our economic system and markets, but also having real effects here at home. The tens of thousands of manufacturing jobs lost in Oklahoma this year are not abstract macroeconomic constructs to those idle workers and their families.

Thriving in the world economy, or merely surviving the worst recession since the 1930s, requires a collective effort unimaginable just 20 years ago. Industry, government and educational institutions must cooperate to ensure Oklahomans have an abundance of economic opportunities and that our employers have a similar abundance of highly skilled, knowledge-based workers.

The degree to which prosperity will accrue by greater investment in our people is unquantifiable; but we have seen the effects of having the skills for a commodity-based Third World economy and it is not a pretty picture.

So we, citizens representing a diverse people involved in education, government and business, chose to convene in Norman, Oklahoma, the home of one of our premier institutions of higher learning, to consider how to invest more in ourselves.

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STRENGTHS AND WEAKNESSES OF OUR EXISTING SYTEMS

Oklahoma has three distinct educational systems. They are K – 12 Education, Career & Technology Education and Higher Education. For the purposes of this Town Hall, the Oklahoma Academy has designated Early Childhood Education (referred to as ECE) as a fourth system. The strengths and weaknesses of each system were considered.

Early Education

Brains develop over time. Neural circuits are wired in a bottom-up sequence. The capacity for “brain change” diminishes as we age. The period in which intelligence can be most positively influenced is from birth through three years of age. This is scientific fact. As a consequence, a high rate of return should be realized by investments in early childhood education (ECE).

Oklahoma’s ECE effort is nationally recognized. State funding for ECE has been made available since 1990. The National Institute for Early Education Research considers Oklahoma an ECE model for the rest of the nation and has ranked as the best performing state in the nation.

The factors contributing to this successful Oklahoma effort include:

- Teacher certification in ECE
- Involvement of parents and the business community
- High percentage of utilization, and
- Demonstrated advocacy for children.

The successes of ECE are not solely due to the efforts of our public schools. Community leaders, philanthropists, business leaders and tribal governments are all important contributors to quality ECE in Oklahoma.

Oklahoma continues to expand this preeminence in ECE through innovative public-private collaborations and programs. These programs aim to break the cycle of poverty through education and family support services, including medical care and mental health support.

Although Oklahoma’s ECE system has great strengths, several limitations were also noted and discussed. They are prevalent nationwide. These include:

- Low ECE teacher pay.
- Labor pool with inadequate technology and language skills.
- Increasing number of in-home child care centers that are not certified or accredited.
- Statewide lack of resources that prevent some districts from offering vital ECE programs.
- High turnover of educators and the continuity of teachers’ relationships with the students.

While the broad excellence of Oklahoma’s ECE program is important, there are ever present difficulties in addressing the individualized needs of each child in accordance on a regional, cultural and environmental basis. The most effective ECE programs will always be complementary family ECE development.

The one common failing of ECE is in failure to capitalize on the advantages created by ECE. Over time, children who have participated in ECE begin to lose the advantages gained by participation in such programs. Greater parental support and involvement is required to maintain momentum and avoid the “fade-out” effect. Research and accountability should be emphasized to maintain ECE advancements. Longitudinal studies and databases are needed to track advancements of children from ECE into later programs, and to determine those factors that most positively impact ECE.

K – 12 Education

There are a number of areas of strength in Oklahoma’s K – 12 System. These areas include:

- Quality Teachers. To be an educator in any time, but particularly today, is a dedicated pursuit. These teachers form the backbone of the system and are the product not only of Oklahoma’s university system but of continued professional development. Oklahoma is 10th nationally in the number of teachers achieving National Board Certification, which is credited to the personal initiative of our teachers and incentives offered by the state.
- Targeted and Alternative Programs. Oklahoma is a state with scarce resources and targeted investments must be made to achieve the desired results. Programs such as the Oklahoma School for Science and Mathematics and its regional centers at Career Tech institutions have provided education levels once available only in the most exclusive private schools. Important programs, such as Oklahoma Promise, assist students in moving on to higher education.
- School Choice; Charter and Specialty Schools. Innovation in education delivery, such as 1:1 learning, distance education, OneNet, OETA grants, charter schools and others, can offer alternatives for parents without the constraints of regulations. Specialty schools innovative in education delivery, such as charter schools, virtual schools, magnet schools, alternative academies, schools within a school and career academies, are important. These programs focus on student needs and provide choice for parents and students. Charter schools such as Harding Charter Preparatory High School in Oklahoma City, which was named one of the best high schools in the country by *Newsweek* magazine, can offer competition, operational flexibility, accountability and transparency of operation that enhance the total system. These types of programs focus the issue on what works, not on monolithic constructs of education.
- A Vibrant and Diverse Student Population. Our students embody our traditional values of hard work and initiative.
- Use of Technology. As a rural state with a small population but large geographic area, the use of technology is essential to delivering quality instruction to all students. Programs, such as 1:1 learning, have enabled Oklahoma to rank high in the use of technology, scoring 12th in “Technology Counts 2009.”
- No Pre-Determined Career Paths. In many countries with which the U.S. is competing, students are driven into particular careers based on aptitudes or test results. While that system sometimes has profound competitive advantages, particularly in science and engineering industries, in our K – 12 system students don’t have pre-determined career paths. Their careers and passions, such as the arts and other creative endeavors, are not limited or defined by their aptitudes or test results.

There are weaknesses in and challenges to the K – 12 System. These include:

- Low National Rankings. Despite the strengths enumerated above, and pockets of excellence that have sprouted (such as the high national ECE ranking), Oklahoma’s low national rankings in education have been a fixture. The U.S. Chamber of Commerce gave Oklahoma’s public school system an “F” in student achievement. Fair or not, these assessments exist and reflect serious performance issues.
- Need for a More Rigorous and Enriching Curriculum. There is a lack of challenging curricula and access to higher level classes and foreign languages, especially in rural school districts, to better prepare students for the future. A more rigorous, creative, whole child approach that includes the fine arts and physical education is needed for all children. Schools are teaching for testing rather than fostering creativity or teaching to each child’s aptitude. Also, while social development and extracurricular activities are important to childhood development, more focus needs to be placed upon academic skills.
- Need for More Choice, Accountability and Transparency. Our education system must impose accountability for schools, students and teachers and an environment of mutual respect and academic rigor. Greater expectations must be set at the earliest stage possible in order to better ensure successful completion of higher education.
- Poor Student Performance. Although there are areas of student success, indicia such as the amount of remedial courses at the higher education level and the low level of comprehensive retention rates suggest poor preparation at the K – 12 levels. Too many students are allowed to slip through the system without an adequate foundation.
- Rigid Teacher Qualification. There is a perception that it is too difficult for subject matter experts to qualify to teach in K – 12. More opportunities should be made available for teachers to enter the profession from nontraditional paths.

Career and Technology Education

Oklahoma has been identified as a leader with its CareerTech system, which aligns training and certification with industry needs. CareerTech successfully integrates with the state’s K – 12 System to prepare students for advancement and better jobs beyond high school. This program consists of hands-on training and application of the skills demanded by employers in the 21st century workplace as an alternative to the traditional academic setting.

Strengths of the Career and Technology Education System include:

- Applied academics
- Relevance, curriculum is tied to real world application
- Collaboration with business and industry through advisory councils, internships student work experience and mentoring
- Job placement rate
- Embedded entrepreneurial and academic skills
- Alliance agreements with higher education
- Career guidance
- Increasing higher level mathematics and science, as well as, science specialists to integrate practical application in the Career Tech curriculum, OSSM, the academies, Project Lead the Way, and Gateway (for middle school)

- Integrating high school students with adult learners diversifies the population and creates a real-life work environment
- National and transferable credentials from (offered and validated) business and industry

Weaknesses associated with Career Tech include:

- Limited job opportunities with respect to advancement after the initial job placement
- Lapses in integration of CareerTech with the K – 12 system
- Erosion of higher level courses (i.e., sciences, arts, etc.) for secondary students matriculating in CareerTech, with a perception of lower academic expectations for these students and associated stigma

Higher Education

Oklahoma offers nationally recognized institutions of higher education that provide accessible and affordable educational opportunities. This system consists of both public and private centers of excellence that offer many opportunities for quality education across many disciplines. Other strengths of this system include collaboration among many institutions across the state and a strong research infrastructure.

Our higher education institutions, both public and private, have achieved recognition in certain fields, but our schools must earn higher overall rankings and be universally regarded as best in breed in order for Oklahoma to be more globally competitive and for our workforce to have the best job opportunities. Score gaps comparing student performance on state versus national examinations are evidence that state academic content standards and curricula are not benchmarked against national and international standards.

While higher education is a worthy goal and priority for many Oklahomans, many students are not prepared for the higher education experience. The effectiveness of higher education institutions is affected when time and money are spent making up for students’ deficiencies and ill-preparedness for higher education. Students will remain in remedial status until the K – 12 system more effectively focuses on core academic skills. Higher education has outstanding faculty, but there should be more collaboration between higher education and public school systems, including a common methodology between the two.

Missions of Our Educational Systems

The mission statements of our constituent educational systems are not expressions of a world-class, competitive environment necessary for the global economy. We suggest one overall mission for Oklahoma education. This mission statement should be visionary and cohesive: *We prepare Oklahomans to succeed and complete globally in education, in the workplace and in life.*

Suggested changes to the departments’ mission statements are:

- Early Childhood Education – Expand the scope beyond “school readiness” and change “childhood” to “early learning system”

- State Department of Education – move emphasis on educators and their role in student development and make it more of a mission statement and less of a governing statement
- Oklahoma Department of Career and Technology Education – This is generally believed to be the best of the four statements but needs to emphasize connecting students with potential employers and needs a more global perspective
- Higher Education – Needs more focus on students and needs more global perspective. It should focus on lifelong learning and research and development

While the education systems should collaborate to succeed in their overarching mission, it is equally important that each system maintain its integrity and focus on deliverable goals within its area of expertise using the following metrics:

- Follow-up with students (i.e. placement)
- Measurement of competency
- Lifelong learning
- Feedback from students over time
- Identify visionary goals and real life application and standards
- International and regional standards/expectations
- Increased completion rate
- Increased advanced degrees
- Better testing on international level
- More attractive business environment in Oklahoma
- Increased global competitiveness in higher wage jobs
- Ratios of people employed in areas for which they are credentialed
- Timely fulfillment of employer tasks
- Decreased poverty rates
- Decreased incarceration rates
- Increased workplace skills obtained in K – 12
- Improved health outcomes
- Increased ACT scores
- Increased number of students taking ACT and AP courses
- Increased per capita income
- More jobs created by Oklahoma graduates

Maximizing Student Capacity

Oklahoma suffers from appalling outcomes related to children, some of them monetary and some of them moral. The trajectory of teenage pregnancy rates in Oklahoma is frightening and its impact on our student population and future workforce is alarming. The Town Hall considered this problem.

Oklahoma policymakers, volunteer and community-based organizations can take a variety of steps to reverse this trend.

There is a need to re-evaluate the role of schools in raising our children. Public schools should include in their basic curriculum life skills training, including parenting skills and financial planning. Teachers should be trained and prepared to recognize local challenges of the children they teach. In-school

counselors should be better trained, especially to understand and recognize early childhood behaviors. Further, these in-school counselors should be focused on their counselor duties, rather than being burdened with other responsibilities.

The responsibilities of schools should not end with the current school day. Children must have a safe place to go after school and after school programs should be expanded, particularly in rural areas, possibly involving school/church collaboration.

The community schools concept should be expanded throughout Oklahoma's elementary education system, as well as, middle and high schools. An increase in competent, focused counselors and substance abuse intervention in after-school programs would be beneficial. Increasing the number of qualified male educators in ECE, as well as middle and high schools, would contribute to greater male role models for young boys.

Policies that encourage family break-up (i.e. economic benefits designated for single mothers) must be reformed and alternative sentencing methods implemented that minimize the impact of a parent's conviction on children. Literacy programs should be expanded. Volunteer and faith-based organizations need to work to expand the availability of mentors or other forms of adult involvement in children's lives. Employers should create opportunities for parental involvement (i.e. time to attend school functions).

With respect to the increasing number of teen parents, as with most social problems, education, particularly that concerning reproductive health education, is the first step. Recognizing that existing approaches have failed to affect the high number of teen parents, alternate approaches based on proven methodologies should be implemented. This education should include career counseling and identification of goals and opportunities. When an unplanned pregnancy occurs, teen parents should still have an option to continue their education to improve the chances of success for the parents and their child. Faith-based and other community organizations could provide additional information or ad campaigns to prevent "children from having children." Schools should implement programs wherein pregnant teens and teen parents discuss and share their experience with middle and high school students.

It is important to work to re-integrate absentee fathers into families by providing opportunities, initiatives and support. Pride in being an involved father should be advocated and promoted.

Early intervention for depression and an increase in after school programs could contribute to a decrease in the number of births to teen parents. Adoption law reform to make adoption easier would lessen the impact of teen pregnancies.

Child Care Systems

Child care organizations and systems will provide safe and secure environments. Early childhood education systems will provide these environments plus curricular educational activities.

Oklahoma was the first state in the nation to implement a quality rating system for licensed childcare (a recommendation from the Oklahoma Academy in 1987); and Oklahoma is now ranked first among states for monitoring the quality of child care centers. The system awards "stars" based upon the demonstrated presence of quality indicators. The "star system" provides incentives for child care

facilities to meet minimum standards that address the provision of safe, effective care for children of impoverished families.

The system recognizes that standards for K – 12 preparedness should be child-centered, recognize that each child develops at different rates, and that assessments should identify improvements that each child has made. The Oklahoma Department of Human Services administers the system. “Graduates” from these centers transition directly to the pre-K – 12 systems.

In order to increase the number of two and three star facilities, Oklahoma should look at ways to reduce the costs of attainment for suppliers. Also, the provision of funding from DHS for families to subsidize childcare should be made more widely available. The maximum income for eligibility for DHS funding should also be increased. In summary, Oklahoma should re-evaluate and re-validate the criteria for attainment of three-star accreditation.

Many positive outcomes were identified in the state’s childcare rating system. It is often easy to recognize students who attended two or three star facilities. Many children entering the K – 12 system are better prepared or perform at higher levels than children who did not attend such facilities. While the ratings system is admirable, Oklahoma’s efforts should not be limited to current efforts. It is important to continually identify more advanced standards for implementation.

Educating the public on the rating system may help to expand these services through public awareness and demand. The rating system promotes early care and learning/development as a career. This results in more teachers being engaged and ECE students are more aware of childcare issues. The rating system has also resulted in better childcare programs and facilities. It has also increased accountability for proper childcare and identifiable criteria for parents to evaluate childcare programs.

Suggested actions to improve the star rating system for childcare facilities include:

- Underwrite via tax credits
- Public-private partnerships to promote increased quality child care services
- Vouchers for low income families
- Expanded availability of financing for new childcare facilities.

Finally, it is critical and fundamental to develop a results or accountability component for tracking the effectiveness of the “star system” on future student performance; and to make the program available and financially feasible for all cultural and socio-economic sectors of the community. This is necessary in order to make quality, affordable childcare available for the working poor.

Early Childhood Education (ECE)

The Town Hall considered how to accelerate our prominence in ECE focusing upon the value and appropriateness of longitudinal outcome studies. These studies would determine whether these investments are providing a good return and if there are other effective childhood education models to assess.

There are a variety of nationally accredited ECE programs in Oklahoma. Ideas for accelerating Oklahoma's prominence in early childhood education were considered. A key consideration was

developing longitudinal studies to validate the projected return on investment and program effectiveness. The longitudinal data gathered from a comprehensive tracking system would enable Oklahoma to compare our early education programs nationwide for development of further models. Affordability of other models is a factor for consideration. Pilot projects could be used to identify and test effectiveness. Special considerations must be made to encourage rural implementation of such programs.

The importance of early childhood education occurring between the ages of 0 through 3 cannot be ignored. The state must find ways to increase funding for the State Pilot Program (SPP). The SPP is an existing public-private partnership designed to increase the quality of ECE programs across the state and to increase the number of slots available to children ages 0 through 3.

ECE should be expanded to older children. Longitudinal studies will be helpful in gauging the effectiveness of the program and determining whether these programs provide a good return on investment. Tracking of the gains made in early ECE through the K – 12 system will ensure that the gains are not lost. Such studies should track the inputs and outcomes that exist comparing values and outcomes across all regions the state. Early data from certain urban programs show that students are on par with students in suburban areas.

Key benchmarks (those that may be implemented on a larger scale for less money) should be identified so that the model is accessible by more students. Selected programs have focused upon speech, language and one-on-one interaction that helps overcome adverse childhood experience and improve performance in education at higher levels.

An educational research clearinghouse that disseminates information regarding successful implementation will benefit the state substantively and fiscally. This should be inclusive of all programs and should utilize and incorporate existing data that state agencies already collect. All early childhood programs, especially those funded with public dollars, should be included.

Oklahoma should examine effective models for innovative childcare options that may include in-home parenting classes, on-site healthcare and childcare services, and other alternatives.

Technology and distance learning could be utilized and expanded to create a comprehensive system for tracking results and outcomes. A tracking system to reduce paperwork and the burden on parents and schools would result. Distance learning should also be used to teach various methods of early childhood education.

The business community has a long history of supporting ECE through childcare or other educational facilities. Oklahoma should encourage more public/private partnerships for expansion of ECE sites. The positive impact of the programs on early childhood development is invaluable to all. The critical impact on child enrichment during the first three years for success in later years necessitates the continual improvement and funding of affordable, quality childcare and educational options.

The Town Hall discussions suggested a unifying major strategic action that would serve Oklahoma well. It is to create a Governor's/State Department of Education Task Force that would have two complementary missions. The first will be to facilitate a formal study of the processes and outcomes of in-state early childhood programs that are nationally accredited. The study would locally validate best

practices and measure outcomes. The second mission will be to suggest policies that will result in open and equal access to quality ECE on a statewide basis.

K – 12 SYSTEMS & CAREER TECHS – EDUCATION AND WORKFORCE READINESS

Oklahoma has recently become much more aware of the importance of early childhood education. Children not ready for kindergarten and the primary grades often never catch up. Perhaps a less prominent, but very critical, period in the sequence of our children's education occurs during the middle school years. Students facing the dramatic physical and emotional changes associated with puberty may need special attention in middle school. Otherwise, they face great difficulty in performing high school academic tasks.

Policies and Best Practices

Teaching should be student centered, research based and data driven. Nationally and internationally, benchmark content standards are taught using curricula that reflect these standards. Teachers will be trained to utilize the curricula and analyze individual student needs and academic outcomes through the use of a robust state student data system.

The Town Hall considered what special actions our schools should be implementing to assure that students are truly ready for middle school and high school and whether there are effective models Oklahoma should consider. In addition, whether Oklahoma should create a “best practices” portfolio to share with local school districts was examined.

Special actions schools should consider implementing:

- Early assessment of student deficiencies in order to address such issues in later grades on a timely basis
- Eliminating social promoting and/or increase accountability before it contributes to students being promoted without the necessary skill sets for advancement
- Better development of curriculum and educational programs to address these challenges and diagnostic testing for child development and basic skills assessment (reading, math and science)
- Peer group mentoring programs through the training of older students in leadership skills to mentor younger students
- Providing leadership and conflict resolution training to students, as well as peer monitoring programs to assist students

As children prepare for middle and high school, counselors should return to more of a mental and emotional health perspective and spend less time monitoring exams. Additionally, encouraging peer mentoring programs and stronger parental involvement can assist children with this transitional experience. School systems should be encouraged to participate with programs such as Great Expectations and A+ Schools. Model programs, such as “GEAR UP,” should be further utilized, while teachers and counselors should undergo further training to develop long-range curricula emphasizing middle school through high school development.

Educators and administrators would be more effective in parental outreach by encouraging parental participation during periods that are more conducive to the parents' availability, including outreach through community centers, home visits and church groups. A parental contract for participation can encourage stronger family involvement, such as with the Knowledge Is Power Program (KIPP) schools.

To truly prepare our students for middle and high school, effective assessments of student preparedness needs to be adopted. Such assessments can be used to develop a best practices portfolio to share with lead school districts. Included in this effort must be incentives, such as merit pay, for encouraging teachers to pursue professional development. Oklahoma should consider expanding the "Adopt a School" program. In developing a best practices portfolio, Oklahoma needs to examine and consider utilizing national and international programs that enhance fundamental academic performance including both Advanced Placement and Pre-AP curriculum. Other techniques to be considered include Measures of Academic Progress and Oklahoma EPAS, OK EPAS is provided by the Oklahoma Regents for Higher Education and consists of an integrated series of assessments and reporting services that supports educators as they help students set and reach goals for life after high school.

Effective models Oklahoma should consider include:

- The European model where children are not advanced until they are ready for advancement
- The "KIPP" model
- Great Expectations
- A+ Schools
- A program patterned after the Corpus Christi mentoring program
- The San Miguel School in Tulsa for 5th to 9th graders.
- The "90-90-90" model for high risk students, a well-rounded approach to middle school teaching that includes enrichment and leadership programs. 90-90-90 schools are at least 90% combined minority, at least 90% free or reduced lunch qualified students, and at least 90% successful on standardized assessments. These schools appear to be doing something unexpected that is leading to a high level of student achievement under challenging circumstances.

Students having difficulty in reading should be kept longer in classes to bring the child to a proficient level. We should not teach to meet grade level standards, but demonstrate to students how foundational skills are applicable in real-world. Teachers' externship programs (during summer vacation, for example) could help teachers bring relevance to the skills they are teaching.

Systemic reform is required. Oklahoma can use accountability and outcomes to implement a best practices policy, and then incentivize the whole-child education programs that are proven to work. Whole-child education focuses on more than just the cognitive elements but also the physical, spiritual, and emotional aspects of a child.

The state should utilize available technology to implement or facilitate the sharing of and collaboration of best practices in education. There could be a clearinghouse of information, not for state dictation of teaching standards but for the provision and availability of information. Ways to educate and share information include intensive teacher conferences, teleconferencing, workshops, etc. The goal is to create a portfolio of information regarding what are the best practices and which of these are the best.

Science Technology, Engineering and Mathematics

A report by the ACT states, “The goal of a high school should be clear: to prepare graduates for life after high school by teaching the skills and knowledge that are essential to college and workforce training readiness.” The ACT report also reveals that Oklahoma high school students significantly lag behind the national average in algebra and biology scores.

The Town Hall identified steps that have been taken to increase Oklahoma’s scores in both mathematics and science, and other initiatives that should be considered for implementation.

Actions Taken to Increase Scores

The steps that have been taken to increase Oklahoma’s scores in math and sciences begin with the adoption of the ACE program graduation requirements and proficiency testing. The Work Keys program and the 4x4 program have also led to increases. Another step that has been taken to increase test scores is the adoption of effective courses at the Career Tech centers making learning math and science fun for students (i.e. robotics and engineering). An increase in middle school math requirements has led to higher math scores.

Actions that SHOULD be taken

Because teacher practice is the number one indicator of student performance, because today’s students learn differently, and because of the changing needs of the work place, instructional processes must be aligned with identified 21st century skills and the individual and diverse needs of students. Instructional practices must be relevant, meaningful and engaging to students. Therefore, the following structures should serve as means to support and facilitate these instructional practices.

Initiatives that should be considered and/or implemented to increase Oklahoma’s scores in both mathematics and science are:

- Universally driven middle school math labs
- More qualified math and science teachers
- Development of math specialists to work with early childhood and elementary teachers
- MIT “Fab Lab” business/community partnerships where students can go and manufacture prototypes of ideas
- Increase math requirements in high schools and track student progress
- Tighten requirements for the current ACE programs
- Longer school days with an emphasis on STEM; development of middle colleges emphasizing math/technology
- Hold teachers to higher standards through accountability, assessment and performance
- Lengthening the school year
- Block scheduling
- Requiring an additional year or more of secondary schooling
- Creating a curriculum that ties the subject to real world applications
- School-to-college coaches to ensure students get core education in math/science to prepare them for college

- Pre-engineering academies to give hands on experience
- Increase student participation in the STEM (Science, Technology, Engineering and Mathematics) Education Coalition
- Increase foreign language programs
- Incentive-based teacher compensation
- Dispense with rote memorization and regurgitation, focus on critical thinking
- Expand professional development opportunities for teachers
- Annual proficiency exams
- Work toward gender equity in math and science through women in science workshops
- Integrate math and science into other subject areas
- ACE and API
- Partnerships between education and industry to get teachers into the workplace to see practical applications and employees into classrooms to engage students in subject matter
- International baccalaureate education

Hard and Soft Skills

In order to be competitive in the college and/or the workplace, high school graduates must master a combination of hard and soft skills.

The suggested hard skills are:

- Reading comprehension
- Research skills
- Certifications in the field of instruction
- Writing skills
- Applied math;
- Critical thinking
- Communication skills
- Foreign languages
- Public speaking

The suggested soft skills are:

- Global perspective
- Customer service
- Commitment
- Accountability
- Sense of “paying your dues”
- Entrepreneurial spirit
- Inter/intrapersonal skills
- Work ethic
- Respect for multiculturalism
- Team player
- Punctuality
- Social skills
- Etiquette
- Flexibility and adaptability

- Professionalism (i.e. how to dress, resume' development)
- Ethics
- Time management
- Creativity

Currently in academic settings, hard and soft skills are taught in athletic programs, extracurricular activities, and programs like Work Keys, Character First, Great Expectations, Tulsa's Thoreau Model Inquiring Teaching, Key Train, Boys and Girls Clubs, Scouting programs, Career Tech student organizations, and the Franklin Covey programs (Seven Habits, The Leader-In-Me, and The Speed of Trust).

Drop-out Rates

There is much literature and research about the drop-out rates in K – 12 education. The negative impacts on future workforce quality are obvious and significant. The Town Hall identified the steps necessary to address this problem, considered whether the state should adopt a universal definition, and identified the most effective middle school and high school programs for significantly reducing drop-out rates.

Addressing the Drop-out Rate

First, Oklahoma needs a clear tracking system for monitoring students' progress through the educational system to ensure that drop-out data are accurate. A robust student-data system is fundamental to train educators on identifying and addressing drop-out problems early on. Further, Oklahoma should develop a comprehensive model for lowering the drop out rate that focuses on alternative education, credit recovery, drop out prevention (social), graduation coaching and drop out recovery.

Oklahoma should employ social workers, teachers, nurses and special educators in schools to help address the issues that occur throughout a student's middle school and high school years that can lead to dropping out. Oklahoma's educational system should offer a credit recovery program so students can get a high school diploma. We should also consider programs like Edmond's 9th grade academies, which help transition students into high school years.

Recognizing that students drop out because of a lack of engagement, among other things, a disciplined school system that is less punitive may help students stay engaged or involved in extracurricular activities. Presently, the school system is not equipped to provide the flexibility that students dealing with family problems may need. The Bridges Program recovers children from harm when parent-child relationships are adversely affecting students' education and grades. Further, we should recognize that some students may be more successful being in a CareerTech setting that teaches fundamentals in English, science and mathematics, along with technical skills.

Teachers must be passionate about teaching, keeping students involved in school, and taking appropriate action to confront potential drop-outs at an early stage. School districts must consider alternative educational opportunities that address the individual needs and abilities of students, while engaging the parents and caregivers.

High drop-out rates can also be addressed by adopting more innovative educational curricula and portfolios that are more flexible in regards to individual students, longer school days and longer school years. Student engagement in academics and extracurricular activities is a positive factor that discourages dropping out of school. Continued support by schools for academically related extracurricular activities will only prevent further drop-outs. Mentoring programs involving the local business community promote professional development and education beyond the classroom. Schools could benefit from education-business partnerships that bring businesses into schools and expose students to various career paths.

Efforts to prevent drop-outs need to begin earlier in the educational experience, especially with elementary teachers and identifiers. Also, recognizing teen physiological traits, school calendars could be restructured to maximize the student's potential by starting school later in the day or adopting a block structure. Additionally, aptitude testing, such as the Kolbe A Index/Instinct Test, are useful for this purpose. A successful program that should be considered by districts is the Durant Middle School STARS Program. This is an innovative approach to early intervention for dropout prevention. In this program, selected students and their families are invited to participate in a program that enriches the student's basic academic skills and performance, while building the personal and social skills necessary to be successful both in and out of school.

Universal Definition

A more comprehensive, universal definition for "drop-out rate" must be adopted. A definition proposed by the National Governors Association was endorsed, as well as, the inclusion of middle school attendance data.

The most effective middle school and high school drop-out reduction efforts include credit recovery projects such as Sophomore Salvation, replicating the "freshman academies," and strengthening truancy and drop-out recovery programs. Further, Oklahoma needs a statewide tracking system for monitoring student progress that also ensures accurate drop-out data. We must better understand the underlying reasons why students drop-out in order to develop retention programs and incentives for staying in school (i.e., school attendance tied to driver's licenses and other privileges). Also, it was suggested that the drop-out problem could be better addressed on a school district basis through mentorship, counseling and tutoring and teaching methods aimed at individual student needs.

Internships and Preparation for Work

The Governor's Council for Workforce and Economic Development has promoted collaboration among educational institutions and workforce development agencies and industries to develop and build a workforce pipeline for Oklahoma's future. Research has shown that student internships during high school are a highly effective way to keep students in school through graduation, as well as, building a workforce pipeline for industry. The Town Hall examined whether internships should be a required part of a secondary education curriculum, and how school districts can coordinate with local businesses to prepare students for work.

Town Hall participants determined that internships should not be a required component of secondary education curriculum, but should be offered in some form on a voluntary basis. Reasons given for not making internships mandatory were:

- Problematic in districts without businesses
- Decrease time on academics
- Lack of available internships
- Variables in the quality and types of internships
- Accountability issues such as “cutting class.”

There is a strong need, however, for a comprehensive career education program at the secondary level, which might include enhanced career counseling, job shadowing and other programs to inform students about the world of work. The argument for voluntary internships centered on the development of skills through an internship that simply cannot be acquired in the classroom setting. Specifically, soft skills are improved. Internships allow for early career exploration for high school students who don't know what they want to do.

School districts can coordinate with local businesses to prepare students for work through virtual and actual tours of industry and bringing industry into the classroom. School districts and industry could develop internships and apprenticeships that result in certification in the field of internship. Virtual internships allow students to obtain the same skills without the concerns of limited availability and geography. An internship program could begin during the student's early educational experience through shadowing programs, incrementally developing into an accredited internship in the student's secondary education. The other ways to promote internships include job shadowing, adoption of a work-based teaching model, networks to pre-match students to industry and connect students with employers and exciting, dynamic career fairs. It should be emphasized that internships should not be limited to the private sector, as public sector employers can also offer enriching experiences for students.

School districts could collaborate with local businesses to create “adopt a school” and executive on loan” programs where business people come into the school to discuss opportunities in that field or devote their time to the school. School districts could encourage community service projects to get students involved and prepare them for the workplace. Another concept is the establishment of an advisory board comprised of local leaders to help with curriculum development, internships and mentorships coordinated specifically with businesses which utilize the specific subject in their trade.

Recommendations

There are many recommendations to strengthen the collaboration between K – 12 and Career Tech. The broad theme is that K – 12 and Career Tech have to buy into the concept that the system as a whole must meet the overall goals for the students and stop competing for resources. Early contact from Career Tech, as early as middle school, through shared career counselors would help K – 12, Career Tech and the student map the student's career path. Economies of scale could be achieved by sharing data, resources and facilities. During the K – 12 years students should be surveyed, using tools such as virtual tours and others, to identify their interest and expose them to careers that speak to their interests.

Charter Schools

Charter schools are public institutions supported by public funds. They typically have greater freedom from state rules and regulations than traditional public schools. For that increased regulatory freedom, each school must establish a “charter” that is essentially a “performance contract” to produce positive academic results, among other things. Nationally, the outcomes (test scores) suggest that students in charter schools, on average, perform slightly better than their public school counterparts, but those results vary by state.

The Town Hall considered whether restrictions to create more charter schools should be lifted or relaxed and what role can the philanthropic and private sector communities play in expanding both the number and quality of charter schools.

Charter schools should be made available to all areas of the state, not just Tulsa and Oklahoma counties. At the minimum, the voters of each county should be offered the option to approve charter schools for that county. Oklahoma’s educational system must be market based, and the ideas that are proven to work need to be shared around the state. The risk of failure is the linchpin of competition and what drives improvement and a better product (i.e., a better school system). Whether the innovation is via charter schools only or via other methods of increased competition, greater competition among public schools is a desired result. Charter schools may be a viable model if it is appropriate for the school district. However, at this point, it will require legislative action to expand beyond Oklahoma and Tulsa counties.

Concerning the relaxation of restrictions, there was an opposing view expressed on the potential adverse impact on rural public schools. Assuming that charter schools typically have more proactively involved parents, an increase in charter schools may result in the loss of parental involvement in the public school system.

HIGHER EDUCATION AND CAREER TECHS – EDUCATION AND CAREER DEVELOPMENT

Incentives for Career Development

Workforce policy: Each legislative session, bills are introduced to create incentives for a specialized segment of the workforce to grow or stay in Oklahoma. A recent example of this is Engineer Tax Credit Program for the OK Aerospace Industry (HB 3239), which provides an income tax credit for qualified employees of up to \$5,000 per year for a maximum of 5 years, and an annual income tax credit of up to 5 years for qualified employers of 10% of the compensation paid to a qualified employee if the employee received his degree from a university or college in Oklahoma. The Town Hall considered whether such a credit is appropriate and whether taxpayers should be responsible for developing a work force for industry.

Workforce development tax credits are an appropriate tool in developing specialized industries. Right, wrong or otherwise, Oklahoma must offer incentives to compete with other states. These incentives must be viewed as an investment, and as with any investment, it only makes sense if studies show a positive return on investment, that the incentive is economically feasible and spurs economic development. These incentives can have many advantages including improved retention of businesses,

a more educated workforce, more college graduates and an improved tax base. These incentives attract new businesses, as well as, Oklahoma graduates who want to return to the state after having left following completion of their education.

These incentives can be used to build upon areas where Oklahoma has recognized strengths and to shore up weaknesses. To accomplish this goal, the incentives must make sense for the specific targeted industry and must satisfy a particular demand. Oklahoma must target resources in areas where there is the greatest return on investment and broadest range of industries. Incentives should be designed to create, attract and grow high paying jobs and the establishment of company headquarters, a greater economic benefit than branch plants or operations. Incentives that are industry specific should consider the unintended consequences that may occur in the larger competitive market. While workforce incentives are needed to encourage and support targeted industries, legislation that supplements industry wages should be used rarely and strategically.

Each incentive should undergo a financial analysis to determine its impact on the state's budget and economy and there should be transparency for all of these incentives, such that the recipients and all that benefit from the incentives are made known publicly. For these incentives to be effective, companies getting incentives should be accountable to proper standards and have penalties where appropriate incentive standards and conditions are not met. It was suggested that Oklahoma could give additional incentives to companies willing to locate in economically depressed areas, especially rural areas.

Specific concepts were addressed, such as:

- Transferability of tax credits (i.e., where the generator of the credit transfers or sells the credit to another taxpayer that applies the credit to the taxes it pays)
- Providing financial incentives and subsidizing students directly (rather than post graduate tax credits)
- Provision of tax credits by particular agencies in targeted areas without a need for legislative action
- An advisory panel to review and develop financial incentives for economic development according to the industry or effort most essential to the state's economy at the time

Periodic review should be undertaken to reform or further develop existing laws such as The Quality Jobs Act, which provides rebates based on a percentage of payroll expense related to the creation of new high-paying jobs. This is essential to ensure the competitiveness of the credit, as well as, to assess the benefit of the credit to Oklahoma's overall economy. Oklahoma should provide incentives to companies that actively recruit at Oklahoma universities and create incentives to target professionals seeking to return to Oklahoma. Whatever short term incentives are adopted, care must be taken to ensure that there is a long term solution to retain employers and their workforce after the incentives have expired.

The bottom line is that the incentives must truly attract desired employers, the industry receiving the credits must contribute to economic diversification, the benefiting industry must not negatively affect either the environment or create new quality of life issues and there must be a positive return on the state's financial investment. Any incentive that fails these criteria should not be made available by the state.

Career Development Programs

Career and Technology Education programs are intended to address dropout recovery and prevention, workplace readiness, STEM education and student engagement. The Town Hall considered the claims that this system is addressing these objectives effectively, and discussed how to replicate programs that are successfully incorporating their principles in secondary curricula.

There is evidence that Career Tech programs are addressing these objectives effectively, as value is being added to the economy and the educational benefits are life-long for the students. The Career Tech system provides career guidance, student engagement and workplace readiness. Career Tech programs have clearly identified outcomes and evaluation techniques that attempt to ensure that the classes or programs offered are in demand and relevant to both the student and industry, that job performance is maintained and needed industry credentials are obtained.

Career academies and “cluster” programs have been effective in identifying industry growth in Oklahoma, assisting students in career path choices and training students for work in the industry identified for growth. Other programs include credit recovery or earning college credit through CareerTech programs, job development programs that work in conjunction with industry to identify new trends and employer expectations, individualized curriculum, flexible scheduling and interactive courses that promote learning. Other successful programs include the Yield program, which puts TANF recipients to work; Project Hope, which deals with the dropout rate; a longer school year that integrates work experience; and STEM education, which prepares students for college.

The existing programs are not intended to replace alternative forms of public education, but rather to compliment such efforts in drop-out prevention and workforce development. Participants receive both academic and professional training through these programs, which should be expanded and receive increased funding. These efforts can be enhanced by developing a stronger program that engages industries in recruiting and offering employment or training opportunities to students. CareerTech programs identify at risk students early on in the students’ educational experience and can be useful in breaking the cycle of poverty.

Students should be encouraged to enroll in both the traditional high school and the local technology centers; however, it should be recognized that most Career Techs are already an established part of the traditional school system. With over 250 alternative education programs in Oklahoma, enhanced efforts should be undertaken to introduce and encourage students to participate in the applied learning programs Career Techs offer. Career Tech retention or drop-out prevention programs should be expanded to middle schools. Programs such as Gateway to Technology are directed to middle schools; however, the challenge in is the shortage of middle school teachers qualified to teach STEM.

Career Tech does a good job of engaging students and keeping their interest by demonstrating the real world applications of classroom lessons, treating students as adults, and providing feedback in a qualitative manner, not only letter grade on paper, that is similar to workplace evaluations. These types of programs are beneficial because they show students the relevance of these steps in life and in the workplace. Teachers in the school system should utilize CareerTech centers to bring real world examples to their students through cross-curricular integrations.

The National Survey of Student Engagement should be considered as a model for developing an effective tool for assessing student engagement in Career Tech programs. Developed by the University of Indiana, students are polled on how they are treated and what happens at school.

STEM (Science, Technology, Engineering and Math) Workers

India and China are dedicated to producing students proficient in math and science. In order to be more globally competitive, it has been suggested that the United States (and Oklahoma) must increase the number of students proficient in these academic areas who choose career paths in the fields of science, math, engineering and technology. The Town Hall considered how we prepare workers for jobs in STEM.

In order to increase the number of people skilled in the hard sciences, Oklahoma must implement additional “rigor” in STEM teacher preparation courses, especially for teachers at the elementary level. Because of the importance of the STEM courses, it is necessary to prepare teachers at the highest level and require ongoing professional development in such fields. Teachers must be better prepared in science and math as current college preparation is inadequate and further professional development in these fields is much needed.

Oklahoma must ensure that its education systems are preparing teachers and students. One concern is the percentage of teachers currently teaching K – 12 STEM courses with no degree, advanced education or experience in STEM related courses. A lack of qualified STEM teachers and resources results in a low percentage of students taking hard sciences such as physics. Teachers need better training and development in STEM courses starting at the elementary school level, up to the high school level. Also, people who teach STEM subjects need to be able to teach using models and processes that are accessible by students. We should consider implementing programs that generate enthusiasm among kids for math and science. Examples of include: Odyssey of the Mind, FIRST Robotics, Botball, Science Olympiad, BEST Robotics, Gifted and Talented, STEM Academics, STEM summer experiences at college and tech centers, NASA student engagement events. Oklahoma can learn from other states such as Georgia, which received a large federal grant to implement the STEM initiative. Their findings show that education departments resisted bringing professors from other departments to teach math and science to education majors; yet, the incorporation of other teachers to teach math and science greatly increased the ability of teachers to later teach those subjects.

Best practices must be developed for teaching K – 12 STEM courses, implemented not only in teacher certification and degree requirements, but also in continuing education requirements. Students need to be excited about and have competence in math and science. Oklahoma needs a more rigorous curriculum for STEM courses, but our teachers must first be competent in teaching these methods in an exciting and engaging way. Effective teaching that promotes student competitiveness on an international basis does not necessarily mean expanding or lengthening current hourly requirements.

This must be a system-wide change. All levels of education must be brought under a common rubric with common goals. Accountability standards for teachers should be imposed, such as continuing education requirements and standards recognized and enforced by administrators.

A minority view was that Oklahoma STEM education didn't need more “rigor” but rather increased flexibility, creativity and motivation in these programs by removing any barriers for subject matter

experts in the classrooms. Standardized teacher certification may open up opportunities for professionals and others with practical experience and expertise to teach such classes. Programs such as AmeriCorps may be useful as a model of promoting professional opportunities in this field.

Incentives, including increased teacher salary for STEM certification, should be considered as a method of promoting STEM courses and attracting higher caliber teachers or professionals. Much like the higher education system of pay differential for certain disciplines based on “market” demands, the K – 12 system should emphasize STEM courses through higher salary. Further, Oklahoma has trouble recruiting and retaining qualified teachers, especially in these fields. Oklahoma should consider expanding teacher recruitment and retention programs, such as student loan forgiveness and tax incentives for businesses that hire STEM qualified teachers during summer months. This has the potential of raising the salaries of qualified teachers on par with the private sector plus bringing real world experience to the classrooms.

Making sure that students apply STEM skills creatively in the workplace is a challenge that can be addressed through creative accreditation in these fields, internships, job shadowing, employer surveying and more involvement from industry on real world applications as part of the STEM curriculum.

Financial Assistance for Career Development

Oklahoma has a number of programs in place to provide families with ways to reduce the financial burdens of college/university tuition and fees (Oklahoma Promise, Guaranteed Loan Program, Tuition Aid Grants, College Savings Plan, GEAR UP). Despite that, many Oklahoma families still struggle to send their children to college, and many who do attend and graduate carry a sizeable amount of debt upon graduation. The Town Hall identified options to make post-secondary education more affordable to more Oklahomans.

Oklahoma must take steps to make post-secondary education more affordable to more Oklahomans by expanding programs such as the Oklahoma Higher Learning Access Program. For students who complete the program’s requirements while in high school, OHLAP provides scholarships equivalent to all or part of tuition expenses. The scholarships may be used at accredited public and private colleges and for certain programs/courses offered at public career technology centers. Students enrolled in the eighth, ninth and tenth grade, whose family income does not exceed \$50,000, may enroll in the program. Once enrolled, the student must complete a specified 17-unit high school core curriculum, achieve a minimum 2.5 cumulative GPA in both the required core and for and all high school coursework, attend school regularly, and refrain from substance abuse and criminal/delinquent acts.

Ways to expand OHLAP include:

- Raising the income limit
- Account for the number of dependents
- Phase-out benefits over \$50,000 income limit
- Provide OHLAP students a tax credit of \$1,000/year for each year they work in Oklahoma after graduation up to the number of years their degree ordinarily takes to obtain

To help offset some of the costs Oklahoma can also provide a comprehensive work/study program, increase grants and scholarships and promote tuition waivers. Oklahoma should improve lending practices to make funds more effective and available to Oklahoma students. Financial aid programs should look at the student income to determine need, if the student is truly independent.

A key element of reducing costs to the state is to reduce or eliminate remediation. Ensuring an adequate K – 12 preparation for college would alleviate a significant amount of costs. Programs should be designed broadly enough to also assist people returning to school after an absence.

Oklahoma can help students help themselves by educating them on student loan options and repayment, emphasizing that student loans are not intended to maintain one's lifestyle. Oklahoma should further educate parents about taking on debt and the use of 529 plans, which are tax-advantaged savings plans for college expenses. Parents could be more helpful if they were given the tools and skills to assist children with college preparation. Schools and parents could require students receiving financial aid to have an admission plan that identifies the student's plan for attending college, a budget, and a comparison of expenses and benefits that best meet the student's and family's needs.

As mentioned above, Oklahoma has a college savings plan known as a "529 Plan." Under these savings plans, the earnings portion of any distributions used to pay for qualified higher education expenses will be free from federal and Oklahoma income tax.

The amount contributed to the plan can be deducted from Oklahoma taxable income up to a maximum of \$10,000 per year (\$20,000 for couples filing jointly).

Oklahoma could improve its 529 plan by:

- Lowering or eliminating the \$100 minimum initial contribution to encourage broader use
- Removing restrictions on 529 plans limiting to certain programs
- Match 529 contributions

Oklahoma should implement tax incentives for people who are educated in Oklahoma and remain in Oklahoma to work. A directed loan forgiveness program should be adopted for fields with workforce shortages. Oklahoma needs to provide assistance to upper-middle income families who are currently ignored.

Oklahoma colleges should increase the number of online courses and develop strategic alliances with other colleges so that Oklahoma students can take courses at other schools at Oklahoma rates. CareerTech courses should be designed and implemented to satisfy college credit requirements and community college credits should be designed to transfer to four-year universities. These practices would eliminate costs by eliminating overlap. Programs that are available at community colleges in urban areas need to be studied in relation to potential application in rural areas.

Colleges and universities need to curb unnecessary capital spending and have real transparency in fees (i.e., why each fee is necessary and what it is used for). Programs that should be continued and replicated include:

- Rigorous transcript
- Oklahoma scholars
- Oklahoma Promise
- GEAR UP
- Achieve

Changes that can hold costs steady while increasing productivity begin with collaboration between colleges and universities, for example, regarding teaching methods and practices. Colleges can increase efficiency by improving the enrollment process through programs like LEAN and streaming online courses to multiple colleges. The state could create incentives to collaborate.

Private industry could collaborate with colleges to provide on-site institutional incentives from a funding structure currently based on enrollment numbers to one based on results, such as retention and graduation rates. Oklahoma should fully fund the endowed chairs program. This recommendation has been made by the Academy for several years.

Meeting the Needs for Jobs to be Most in Demand

“U.S. Employment Ups and Downs, 2006-2016,” Sep-Oct 2009, p. 30 states that the “hottest jobs for 2016” are:

- *Network systems and data communications analysts (53.4% more U.S. employees than in 2006)*
- *Personal and home care aides (up 50.6%)*
- *Home health aides (up 48.7%)*
- *Computer software engineer (up 44.6%)*
- *Veterinary technologist / technician (up 41.0%)*

The Town Hall considered ways to ensure that Oklahoma has a sufficient number of qualified graduates in these and other high growth jobs.

Given the unpredictable manner of technology advancements, betting on the next wave of “hot jobs” for purposes of educating students is a guessing game. Oklahoma should focus instead on giving students the tools and core skills for a broad range of jobs and careers. Oklahoma should pay particular attention to identifying the state’s needs and creating a cooperative partnership among Oklahoma’s educational systems and the business community to address these needs through our educational systems and the career paths of our students. Because demographics are consistently changing, schools must be adaptable to the changing workforce, providing flexibility and opportunity for individuals to improve their skills and move beyond a low-skill, low-wage job.

In order to facilitate these objectives, solid educational foundations with the ability to adapt to new methodologies and technologies are required. Performance expectations in education, which is the primary method of evaluation in the workplace, and high expectations for students must be set as early as possible. Oklahoma must encourage a continued awareness by educators as to the employment opportunities through the collaboration of teachers and industry, professional development, resources in the classroom and other similar means. Other ways to address the professional development issue would be to pay teachers to attend training, encourage teachers to work year-round to become educated in new methodologies, or to become better educated in core competencies that are applicable to emerging markets.

To the extent that high demand jobs can be identified, loan reduction or loan deferral may be a good investment. Other programs to consider include:

- Counselors identifying these “hot jobs” and engaging students early
- Adult version of Oklahoma’s Promise scholarship program
- Encouraging adults to return to Career Tech

- Target and re-engage people with college credits but no degree
- Teach Oklahoma program
- Find ways to encourage international students to stay in Oklahoma
- Public/private partnerships where internships ultimately result in job placement in targeted fields
- Continue the support of Project Boomerang, which identifies native Oklahomans working in critical industries outside of the state to encourage them to return
- Employee retention programs, which assist employers to transition new employees from school to full-time employment
- Mentoring programs that identify career opportunities
- Collaboration and communication between schools and employers to better understand the needs of employers and adopt teaching methods accordingly

One innovative idea is a statewide initiative to create a standardized state of the art technology infrastructure to support PDA's or other mobile learning devices, such as the Duke iPod program. This initiative would enable students and faculties to stay better informed of new technology, job growth trends and opportunities and important data on future market trends and needs. This information could be used in conjunction with career exploration, career pathways and career clusters to support a pipeline of students to the trending industries.

The workforce development system does not need to be limited to the current three-tiered system, and should be flexible and adaptable enough to accommodate professionals outside the identified educational systems. For example, a professional should be able to laterally transfer into these new markets in a timely fashion, without completely derailing the person's ability to continue work and support his or her family. Oklahoma's distance learning infrastructure should be further utilized and expanded to coordinate efforts among educators at each level, business leaders and potential employment markets.

Advanced reasoning, creativity, ethics, applied sciences and related curricula must be incorporated into our teacher development programs. Perhaps funding incentives could be provided to encourage universities to recruit from Oklahoma's high schools, while working with the primary and secondary systems to develop curricula that will best prepare their students to compete at the higher education level. Also, incentives can be provided to universities offering concurrent enrollment in STEM courses.

Understanding Oklahoma's regional position in these high growth job markets is integral to ensuring more qualified graduates. Computer science courses should be included in the STEM curriculum, as well as, informing students of job opportunities and career paths related to STEM courses from an early age.

Models such as the Broad Foundation superintendent training program could be created in Oklahoma to identify and prepare professionals from the specific high growth fields to become educators in the subject in Oklahoma schools. The Broad Superintendents Academy is a 10-month executive management training program to prepare prominent leaders from education, military, business, nonprofit and government sectors to lead urban public school systems.

Finally, the leaders of our state’s educational institutions, such as the Superintendent of Public Instruction, the Chancellor of Higher Education and the Director of Career and Technology Education, need to meet regularly to identify, develop and coordinate best practices for preparing our students.

APPLYING “BIG THOUGHTS” TO IMPROVE EDUCATION SYSTEMS, ACCOUNTABILITY AND OUTCOMES

Continued K – 12 Reform: HB 1017, The Sequel

HB 1017 was passed in 1990 and represented a significant shift in Oklahoma’s commitment to education. Participants in Task Force 2000, which led to HB 1017, contend that, though many of the reforms contemplated by the Task Force did not take, the basic approach was to establish a results oriented curriculum (i.e. determine what the students are supposed to have learned from having taken each course) and for the state to develop tests that would be administered at the end of each course to measure whether the designated results were achieved. HB 1017 then contained a mechanism whereby the Department of Education was to develop a method by which schools that showed that they were achieving good outcomes could be relieved from various mandates and regulations, such as class size and other requirements added by HB 1017. The Town Hall considered whether an approach such as this continues to make sense and what refinements should be made to make this work or work better.

Oklahoma needs a results oriented curriculum that includes end of instruction examinations that are rigorous and varied enough to assess multiple learning styles. These “end-of- instruction” tests should be based on national and international standards, measure college readiness and be tailored to each student’s individual career goals. End of instruction exams should test classroom learning, applied learning and critical thinking skills. Schools should use end of instruction exams to identify students who have passed the end of instruction but not demonstrated college readiness in order to help those students prepare for college.

Because current testing, evaluation and teaching methods cater to the middle or average student, the evaluation system should be fundamentally changed to allow proficient students to advance while remediating underperforming students. SAT tests should be utilized in addition to the ACT. Students should be evaluated early to identify student needs, and quantifiable methods other than standardized testing should also be developed to evaluate students.

Regular review of this testing program must be done to determine needed changes to reform and improve the curriculum. Evaluation methods should also be continuously refined and improved. While the mandates in HB 1017 generally should be continued, these standards should be comprehensively reviewed and updated, with an emphasis on input from the business sector to ensure students are career ready. This results-oriented curriculum should allow teachers the flexibility to teach in new ways, while emphasizing broad accountability and adequate and equitable funding. Evaluation of the testing program should be conducted by a task force of diverse members without political agendas or those who will further entrench the status quo.

The overarching recommendations considered by Task Force 2000 that were not included in HB 1017 are very worthy and need to be revisited by a newly appointed Task Force. Specifically, goals should focus on the big picture of what we want from our schools, rather than how we run them. The

Academy could serve a role in promoting task force recommendations for the future direction of education to the relevant constituencies to garner support for new legislation.

Online Education Delivery

Technology is going to continue to improve and be more infused in all that we do. There are more than one million public school students now taking classes online; Florida has the most with just over 200,000. Three quarters of public school districts are offering online only or courses that mix online with traditional education. Many quality lessons have been learned from the post-secondary experiences at the college level. The Town Hall addressed the expansion of online education.

Oklahoma should aggressively pursue a statewide online educational program that borrows from the best programs around the country, but also seeks input from parents, students, school boards, business and industry leaders. An online program would act as a supplement to the overall educational delivery system to be implemented as needed and incorporated as appropriate. For example, online and technology related courses could be utilized by high performing students, thus freeing up valuable resources and teacher time for remedial students that may require extra hands-on attention.

Technology-based instruction programs will bring expanded course offerings to rural communities (i.e. foreign languages). Oklahoma must establish an infrastructure to take advantage of strategic partnerships with existing entities to maximize resources; otherwise, Oklahoma may engage in a costly trial and error process. Oklahoma does not need to re-invent the wheel. Instead, it should research successful programs, design a model and then utilize vendors who will keep the delivery method up to date. Oklahoma may also need to consider whether a hybrid tech-based/traditional program is needed and who will actually deliver the online content.

Oklahoma's aggressive pursuit of a statewide online educational program should include virtual schools. Florida developed the first virtual school in the country, and more than 30 states have online schools or virtual schools. The most successful are state run. Oklahoma should examine the current models for virtual systems in place throughout the U.S. and utilize available technology and infrastructure in Oklahoma to develop such a program. Regardless of the technology employed, Oklahoma needs a standardized, technology-based instruction program in connection with any virtual school system it may adopt. Oklahoma should look beyond traditional views of technology-based educational programs and should use internationally recognized faculty, innovative tools and recognized content delivery methods.

One approach would be to aggressively pursue a truly statewide data sharing and online education forum open to all, offering K – 12 and beyond resources for learning and development. A certified online library could be created for resource sharing, effectively distributing costs amongst schools that utilize the system.

Involving students in creating content for online education systems is a creative approach to enhancing student satisfaction and learning. As online education programs continue to develop, outsourcing the development of content and operating systems could alleviate the costs of implementing education initiatives in Oklahoma.

Steps for implementing this online program would include specifying goals and school objectives, identifying "pockets of excellence," supporting professional development, shaping public perceptions

of online courses, monitoring the development and making recommendations going forward, including evaluating what areas are practical for teaching online.

Online delivery methods should acknowledge the research conclusions of the U.S. Department of Education that determined that blended courses that combine online instruction with traditional classroom education is the most effective method for student comprehension of course content. If an online model were adopted, the state would provide quality assurance for the curriculum, but the implementations would be at the local level.

Standards and guidelines are important to ensure that students are receiving a quality education to monitor the number and type of tech-based classes students take. Guidelines also ensure that courses chosen are actually suitable for tech-based instruction.

Also, while there is still a place for interactive, in-person instruction delivery methods, it is critical that all teachers are trained to be effective with technology. For example, in college, co-curricular concerns are more important for traditional students and less important for non-traditional students who are returning to school after several years.

Transformational Strategic Plan

Many believe that education is a key to everything we do and that a good education is critical to a quality life. It is the opinion of many that an “Early Childhood through 14 education” must be considered a worthy priority by all. It has been stated that in Oklahoma we seem to be more interested in the state of our football programs than our core learning programs. The Town Hall considered how to develop a transformational strategic plan for Oklahoma’s educational systems that would trigger a cultural renaissance about the value of learning and the value of comprehensive education.

Oklahoma must remove barriers to education for students from diverse backgrounds and infuse culturally diverse curricula throughout the system. The Oklahoma Department of Commerce should develop a multimedia public relations campaign promoting the benefits of education. All three tiers of our education sectors should re-evaluate their mission statements to be student centered, integrated and seamless.

Oklahoma should develop an education 2020 panel to develop goals for education and suggest reforms in legislative and regulatory guidelines to develop a modern, workable and visionary educational system. This could be developed through community meetings and town halls with relevant stakeholders. This panel should task the state superintendent with coordinating systemic change through convening a series of regional advisory boards comprising local industry, education representatives, elected officials and families to identify education reformation and implement the vision set forth by the 2020 panel.

The Academy should sponsor a gubernatorial and state superintendent forum in this election cycle on the subject of a strategic plan for education. The Academy should also sponsor a summit for the state superintendent, chancellor of higher education, director of Career Tech and certain invited stakeholders (students, industry, and educators). It is recommended to be a two day event with an outside, prominent moderator to facilitate the discussion.

Among the elements to be considered by such a plan would be the following:

- Schools should provide enhanced technological training for educators to help keep up with modern trends, gearing curriculum towards emotional intelligence, technological developments, STEM and critical thinking
- Oklahoma should consider a competency-based system so that students move forward as they demonstrate competency in any given area
- Legislation should be enacted to make it easier to remove underperforming teachers
- Legislation should also be enacted to eliminate and/or consolidate dependent school districts.
- High school students should be required to have six hours of CareerTech (college or vocational) credit on site or through virtual learning (Ohio model)
- Schools should also provide more integrated and aggressive opportunities for parental involvement
- Greater advantage should be made of technological advances such as portable electronic devices used in “one-to-one” programs

Transformational changes to the system should include:

- Extended school day/year round schools
- Proficiency based promotion of students
- Continued focus on 0-4 education, but not mandated
- Address health and wellness
- Career counseling (middle school, high school and college)
- Attention to behavioral/mental health
- Merit based pay for teachers as well as peer review
- Leadership for the evaluation methods necessary for merit-based evaluations
- Block schedules
- Better funding for professional development for teachers
- Statewide development and support of local P-20 councils that coordinate and integrate their efforts with the Governor’s statewide P-20 council.

The Town Hall participants suggest continuing and strengthening current leadership development programs, such as Oklahoma Leadership Academy, Great Expectations (for classroom management and mutual respect), OK Achievement through Collaboration and Technology Support for technology leadership and A+ Schools. These leadership development programs assist current school leaders in facilitating needed change and developing professional learning communities that promote increased learning for all students.

Internships, collaborations with community, middle college, and community schools could all help trigger a cultural renaissance. Oklahoma should adopt at least PreK – 14 systems and should consider PreK – 16 or PreK – 20. To effectively change the education landscape, industry and business must be involved.

School Choice

School choice typically involves school vouchers and scholarship tax credits. Based on high drop-out rates and poor educational performance, proponents believe that parents deserve a wider portfolio of choices when it comes to their child's education. Many of these programs focus on the children of lower-income families.

There was no consensus on whether Oklahoma should consider joining ten other states and the District of Columbia in pursuing a more aggressive statewide school choice program. School choice promotes competition and innovation that could be viewed as positive for better educational opportunities; however, public funds in the form of school vouchers should not go to support private schools.

Another concern raised was that an open transfer policy would result in class flight, not improved educational benefits for lower income families. Further concerns were expressed that rural communities could not support school choice because of the presumed adverse financial impact on public schools. Alternatively, more options should be made available for student choice in attending public charter schools, particularly in rural areas that may not currently qualify under the current regulations.

Other concerns expressed included appropriate educational standards and requirements, parental involvement and a system that offers all students an opportunity to succeed in the school of choice. Rather than endorse an aggressive statewide school choice voucher program, Oklahoma should aggressively make the necessary transformations to address the challenges facing each particular institution, and providing students opportunities to take advantage of more conducive education systems.

There was a consensus, however, that any statewide school choice program should be well-researched and implemented according to a sound public policy that identifies the weaknesses of the current system and doesn't negatively impact the quality of education received by all students.