

# **TAKING INVENTORY**

*Job Skills in the  
Tennessee Workforce*

*A report by the*  
**Tennessee Diploma Project**

Sponsored by:  
Tennessee Business Roundtable  
Hyde Family Foundations

## ABOUT US

### Tennessee Business Roundtable

The Tennessee Business Roundtable is a nonprofit statewide organization of CEOs and business leaders who are committed to sound public policy, especially in the area of K-12 education. Roundtable members represent Tennessee's major economic sectors, including construction, financial services, health care, manufacturing, retail, technology and tourism. The roundtable believes improving public education is the key to building a more skilled workforce, and ensuring a better quality of life for all Tennesseans.

### Hyde Family Foundations

The Hyde Family Foundations are two private, independent grant-making organizations that focus on a range of core priorities, including K-12 education reform. The foundations were created by members of Memphis' Hyde family, beginning with an initial investment by businessman Joseph Hyde Sr. in 1961. Among other initiatives, the foundations look for innovative strategies to expand quality options for students, stimulate positive change and broaden the conversation about how to support excellence in public education.

To download a PDF copy of this report, go to [www.tndiplomaproject.com](http://www.tndiplomaproject.com).

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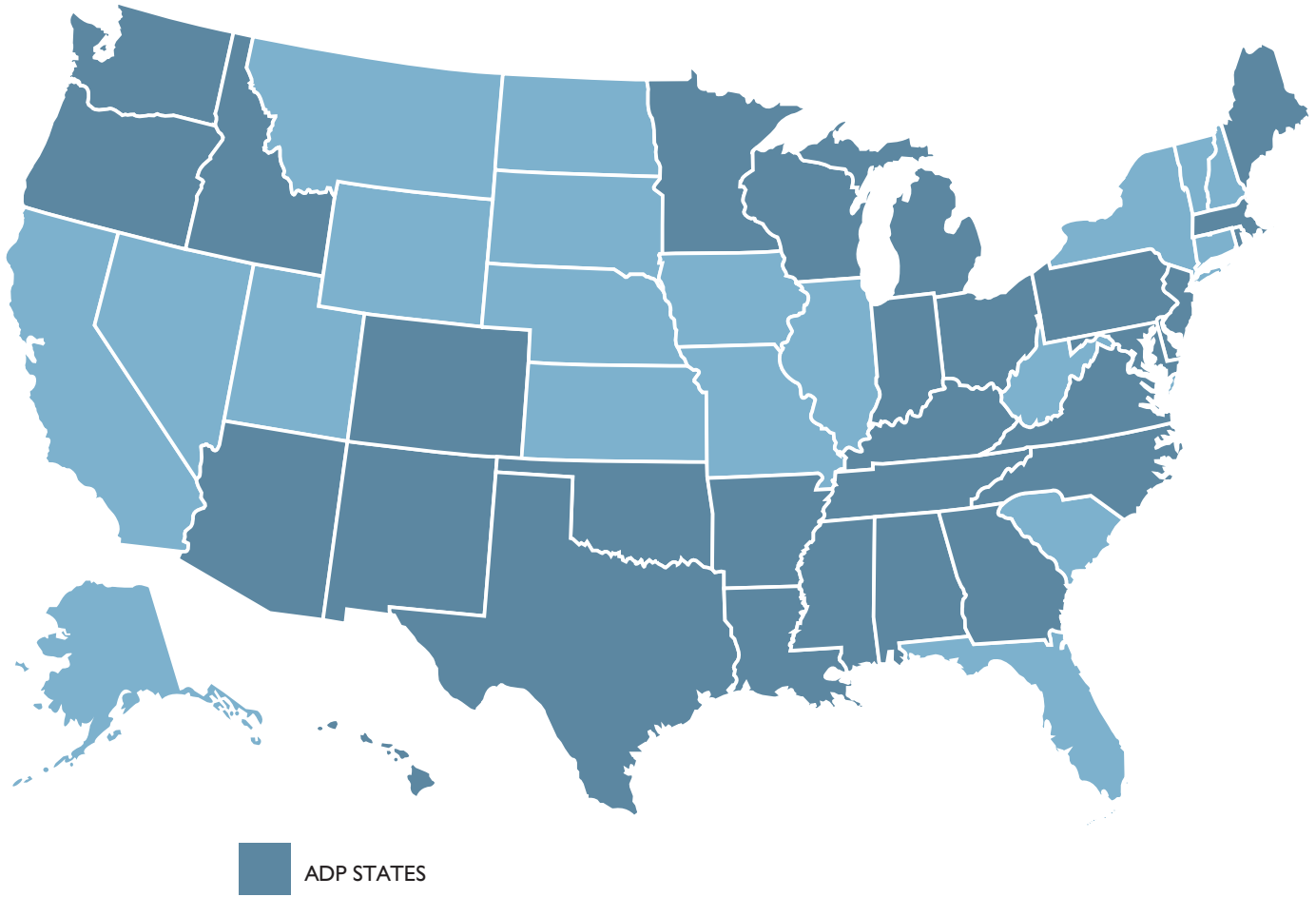
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# AMERICAN DIPLOMA PROJECT STATES



## BACKGROUND

In January 2007, Tennessee joined the rapidly expanding American Diploma Project (ADP) Network, a coalition of 30 states dedicated to aligning high school curriculum, standards, assessments and accountability policies with the demands of college and work. The ADP Network is the flagship initiative of Achieve Inc., a bipartisan nonprofit organization that helps states raise academic standards, improve assessments and strengthen accountability to prepare young people for post-secondary education, work and citizenship. Achieve's major sources of funding include the Bill & Melinda Gates Foundation, the GE Foundation and IBM Corp.

Launched in 2005 following the National Education Summit on High Schools, the ADP Network calls on states to commit to four key priorities:

1. Align high school standards with the demands of college and work.
2. Require students to complete a college- and work-ready curriculum so that earning a diploma ensures that a student is ready for post-secondary opportunities.
3. Build college- and work-ready measures into statewide high school assessment systems.
4. Hold high schools and post-secondary institutions accountable for student preparation and success.

Nationally, the need for higher standards is summed up in a recent Achieve report, which found U.S. college professors and employers report that 42 percent of high school graduates are not ready for college-level work and 45 percent are not ready for jobs beyond the entry level.

In Tennessee, Governor Phil Bredesen is leading efforts to couple additional education investments with higher standards and increased accountability. Bredesen has declared education to be state government's "highest priority," and placed particular emphasis on raising standards in the wake of a U.S. Chamber of Commerce report that gave Tennessee an "F" for truth in advertising about student proficiency.

Specifically, the chamber noted that while "the state identified large percentages of its students as proficient on 2005 state math and reading exams, smaller percentages posted proficient scores on the National Assessment of Educational Progress (NAEP)." Additionally, the governor has set an aggressive goal of raising Tennessee's high school graduation rate from 80.7 percent to 90 percent by 2012.

The Volunteer State in summer 2007 launched the Tennessee Diploma Project with organizational and financial support from the Tennessee Business Roundtable and the Hyde Family Foundations. Overseeing the project is the Tennessee Alignment Committee, a panel of state and local government officials, and business, post-secondary and K-12 leaders from across the state.

The primary goal of the project is to clearly define skills needed for college and work, and communicate the information to state officials working to make changes in the curriculum. Another goal is to build public and stakeholder support for raising education standards in a manner that rises above politics and partisanship. Information gathered will be used in developing the overall plan for addressing ADP Network priorities. ■



## APPROACH

The Tennessee Diploma Project is an initiative of the Tennessee Alignment Committee, a panel of state and local government officials, and business, post-secondary and K-12 leaders from across the state. The primary goal of the project: clearly define job skills needed for certain entry-level positions across the workforce spectrum, and communicate the information to state officials working to better align education standards with the demands of college and work.

As part of its efforts, the Alignment Committee asked the Tennessee Business Roundtable — a statewide organization of CEOs committed to sound public policy — to gather input from key business leaders across the state regarding their observations and expectations of high school graduates' skills and knowledge. The information will be used in developing the overall plan for addressing ADP Network priorities.

The Business Roundtable, with financial support from the Hyde Family Foundations, of Memphis, engaged a full-service public relations, marketing and research firm, McNeely Pigott & Fox Public Relations LLC, to help organize regional roundtable discussions, or informal focus groups, with top business leaders in six markets across the Volunteer State: Chattanooga, Jackson, Knoxville, Memphis, Nashville and Northeast Tennessee. The Business Roundtable worked with local chambers of commerce to identify and invite prospective roundtable participants — specifically, senior executives and human resources professionals representing Tennessee's major employers.



To demonstrate his commitment to the project, Governor Phil Bredesen, who is leading Tennessee's efforts to couple additional education investments with higher standards and increased accountability, volunteered to convene and lead

all six of the roundtable discussions. Key objectives of the meetings included: understanding which skills business leaders want in potential employees, identifying gaps between business needs and

workforce skills, and taking inventory of suggestions for closing the gaps. In all, more than 130 business leaders representing 112 companies and organizations from across the state participated in the roundtable discussions, which occurred between June 19 and August 7, 2007.

Additionally, 346 business leaders from across the state completed surveys rating the importance of key job skills, with an emphasis on English, mathematics, and professional or so-called "soft" skills. The surveys were administered to executives, senior-level managers and human resources professionals with assistance from the Tennessee Chamber of Commerce & Industry and key chapters of the Tennessee Society for Human Resource Management (SHRM). To expedite distribution and tabulation, an online version of the survey was placed on the Web. Surveys were administered, in paper form and online, between June 19 and August 30, 2007.

Bredesen summed up the overall goal of the outreach initiative by extending an open invitation to business leaders to help improve Tennessee's approach to education. "Every time I've ever dealt with education, the business community has been a driving force," he said. "I need your help telling me what we need to be doing, and helping us generate the commitment to making the necessary changes." ■



## EXECUTIVE SUMMARY

Effective verbal communication. Basic mathematics. Problem solving. Critical, independent thinking. Teamwork. These are the skills Tennessee business leaders say are most needed for entry-level jobs in today's economy. They're also the skills most commonly identified as lacking in today's high school graduates.

These are the chief findings of the Tennessee Diploma Project. The results stem from executive roundtable meetings and surveys in which business leaders from across the Volunteer State were asked to share their observations and expectations of high school graduates' skills and knowledge. The roundtable discussions, involving more than 130 key business leaders, were free-form conversations led by Governor Phil Bredesen. The surveys took a more structured path, gathering detailed data from 346 executives, senior-level managers and human resources professionals.

To rank key job skills in terms of relative importance, survey responses were calculated to create an average rating for each skill on a scale of 1 to 10.

**Perhaps not surprisingly, job skills yielding the highest priority in surveys also tended to be the skills frequently cited in roundtables as missing among high school graduates.**

Ratings for math skills touched on a common observation in the roundtables: Too few high school graduates are capable of tackling basic math problems. For example, the highest-rated math skill, with a score of 8.3, was fundamental: "Add, subtract, multiply and divide integers, fractions and decimals." Yet, one East Tennessee business leader summed up roundtable sentiments by saying, "Basic math is a huge issue. I'm talking about fractions and decimals and working without a calculator." A manufacturing executive in West Tennessee confirmed the challenge is "not the high-end, high-order equations. It's the basic skills and the application to solving real-world problems." The need is clear: More emphasis, or perhaps repeated emphasis, on basic math throughout high school.

Similarly, ratings for English skills paralleled common refrains heard during the roundtables, including the need for stronger verbal communication and problem-solving skills, and the ability to work in teams. The highest-rated English skill, with a score of 9.1, seemed simple: "Give and follow spoken instructions to perform specific tasks, to answer questions or to solve problems."

However, roundtable participants cited deficiencies in these areas. One businesswoman in Chattanooga said high-school graduates sometimes appear to lack a "project based, inquiry-based type of instruction." Such training, she added, could better equip entry-level workers to "make things happen and know how to evaluate, assess, disseminate, synthesize and get the job done." In other roundtables, participants repeatedly called for more "real-world" approaches to learning.

Business leaders universally agreed on the importance of key professional or "soft" skills. The highest-rated professional skill, scoring a 9.8, was straightforward: "Take responsibility, act ethically, and be honest." In terms of relative importance, it was closely followed by "take initiative and be able to work independently" and "organize and prioritize tasks, schedule time, and anticipate obstacles." At the same time, several business leaders observed that high school graduates typically aren't ready to operate in streamlined work environments with limited supervision — despite industry trends toward flatter organizational structures. As one Knoxville CEO put it, "In order for American businesses to be competitive, they've taken out a lot of layers of supervision. Employers need employees who don't need to go get help from someone else."

Finally, another top-rated soft skill, “meet professional expectations regarding speech, appearance, punctuality and manners,” brushed against longstanding stereotypes of younger workers: a flagging work ethic and lack of motivation. As one Knoxville manufacturing executive put it, such skills historically amount to “basic blocking and tackling” — meaning, easily instilled traits. However, several business leaders said personal engagement — or as one roundtable participant put it, “passion” — is more noticeably absent in today’s high school graduates.

Most participants noted that parental involvement, while waning, remains the key. As one said: “While it’s important for the schools to teach some of that stuff, you can’t expect them to become the parent.” ■

# ROUNDTABLES





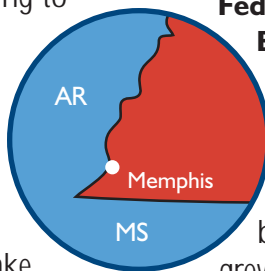
## MEMPHIS 6.19.07

The Tennessee Diploma Project held the first in a series of six executive roundtable meetings in Memphis: the home turf of the project's underwriters, the Hyde Family Foundations. Perhaps best-known as the birthplace of rock 'n' roll, Memphis sits just across the Mississippi River from northeast Arkansas, and lies just north of fast-growing communities in Mississippi.

Known as the Bluff City, Memphis is the economic hub of the mid-South. It's home to leading U.S. companies like AutoZone Inc. and FedEx Corp., world-class research institutions like St. Jude Children's Research Hospital, and a burgeoning biotechnology sector. Like other major American urban centers, Memphis is working to improve its public schools. The business community, led by organizations including the Memphis Regional Chamber and Memphis Tomorrow, is working overtime to make K-12 education a priority. Below are highlights from the Memphis roundtable:

**Governor Phil Bredesen:** "This year, I'm trying to turn the corner in terms of the approach to education in our state. We began by putting additional money in education. Alongside that, we're also making renewed commitments, and new commitments, to accountability and higher standards. If you look back 10 years from now, the changes we will make in standards probably will have had a more profound effect on education than the funding changes."

"Every time I've ever dealt with education, the business community has been a driving force. Practical men and women whose businesses depend on what we do in the schools, and who know something about complex organizations, have always been very supportive. You know if you're turning around a troubled business, you start out by being honest about exactly where you are, confront the issues, then settle down and solve them. I need your help telling me what we need to be doing, and helping us generate the commitment to making the necessary changes. I want specifics here. Tell me in what ways the people



FedEx Global Supply Chain Services CEO Tom Schmitt, front, listens to a conversation about deficiencies in math skills, along with Memphis Tomorrow President Blair Taylor, right, Memphis Tomorrow Chairman Ken Glass and AutoZone Chairman, President and CEO Bill Rhodes.

who are being delivered to your businesses are not measuring up to the standards. Let's start with math and science."

**Martha Perine Beard, senior branch executive, Federal Reserve Bank of St. Louis, Memphis Branch:**

"I'll speak to the math needs. We need students coming into entry-level positions who we can train to move up, even if they haven't been to college. What we find is that some applicants don't have basic math skills. Some of the things that I grew up being able to add in my head, they have to go find a calculator. Even if it's something really simple. It would be good if we can get them to the point that they can still do some of the basic things without needing a machine to help them."

**Bill Rhodes, chairman, president and CEO, AutoZone Inc.:** "I'll add to that. In retail, we require new hires to grasp very simple math concepts. We also have an initiative in the company where we're trying to get people to be ASE (automotive service excellence) certified. It's interesting how many people are able to do the parts knowledge components of the test but can't do the math skills — whether it's fractions, converting standard to metric. They may be great at helping people work on their cars, but they can't

## SITUATION ANALYSIS

### Economic Indicators

Per capita personal income	\$33,529
Unemployment rate	5.7%
Population	1,274,704

Based on Memphis, TN-MS-AR Metropolitan Statistical Area (MSA)

### Education Indicators

SCHOOL SYSTEM	H.S. ENROLLMENT	GRADUATION RATE %
Fayette County	892	64.2
Memphis City	32,817	67.2
Shelby County	12,560	92.3
Tipton County	3,454	88.1

Source: U.S. Bureau of Economic Analysis. U.S. Census Bureau, Tennessee Department of Education, Tennessee Department of Labor and Workforce Development

pass the ASE certification tests because they don't have the education specifics."

#### **Tom Schmitt, CEO, FedEx Global Supply Chain**

**Services:** "We are talking about basic problem solving, sizing issues. Is it a big deal, small deal? Did we make it today, or not make it today, in terms of closing out appropriately?"

**Bredesen:** "Put some more specifics around that. Where do you think they're having difficulty?"

**Schmitt:** "For us, service excellence is top. I have a person — he could be a sorter in a hub — and I'll ask him, 'What type of service day are we having?' By that I mean, do we have lots of missorts or a few missorts? I need somebody working with me who knows

whether we're actually at the level of excellence that we commit to our customers."

#### **Steve Reynolds, president and CEO, Baptist**

**Memorial Health Care Corp.:** "We have 13,000 employees in Tennessee and Mississippi, all of whom work in health care organizations. We're dealing with pharmacists, thousands of nurses, all of whom need to know how to add and subtract. We have our own college of 800 students. And one of the challenges we have is finding students who are prepared to enter the health care professions, and that have these math skills. This is critically important."

**Bredesen:** "Give me an idea — what can't these kids do? Is it, they can't solve quadratic equations? Or they can't add fractions? What is it?"

**Schmitt:** "That would be a great problem to have. More analytics would be great. But the issue we're having is basic math."

#### **B. Thad Solomon, general manager, Nucor Steel**

**Memphis Inc.:** "I would agree with that. It's not the high-end, high-order equations. It's the basic skills and the application to solving real-world problems. In the steel business, for example, it's, 'How much carbon do I need to add to achieve 0.2 percent?' We can do a lot of those things with computer programs. But what if the computer goes down? We need people to understand the concepts and have the skills to support them."

#### **Ellen Thornton, executive director, Tennessee**

**Business Roundtable:** "Our members include those in the construction industry. One of the things I hear over and over again is, people who want to work in contracting are lacking geometry skills. Something as simple as measurement, which we take for granted but that's not that difficult."

#### **Carolyn Hardy, president and CEO, Chism Hardy**

**Enterprises & Hardy Bottling Co.:** "One of the challenges that I see from a manufacturing standpoint is, we need operators who are required to make machine adjustments. I'm a contract manufacturer, which means I do work for anybody. We're constantly

making adjustments. If one person can't make a 1/16 adjustment, and you have to call a mechanic over, the line is down, costs are up and now you can't compete with the other manufacturers. So the challenge, again, is basic math. Calculating. Where to place the ruler on the machinery, or how fast to run the machinery."

**John W. Moore, president and CEO, Memphis Regional Chamber:** "One of the common things we hear is: ask someone to move two-thirds of the product to the west end of the building, and the response is, 'Can you tell me how many pallets that is? And which way is west?'"

**William Evans, director and CEO, St. Jude Children's Research Hospital:** "We're in health care, but we're also in the business of generating new knowledge. Beyond the basic mathematical skills, I need somebody with an ability to work independently, think about complex problems and take information from multiple sources, pull it together, and synthesize new insights, from which you develop a plan in terms of an experiment or new treatment approach. Information is out there with Google and all these search engines; but the ability for somebody to find it, and integrate it, and synthesize it into something new is a challenge, not just at the high school level, but at the college graduate level. So I think we have to be realistic here. All of our shortcomings aren't at the high school level. They go beyond that."

**Hardy:** "One of the other problems in the workplace is attitude. I find that the people who are most capable have a better attitude. The ones who are least capable have a worse attitude. I think it's more of a defense mechanism than anything else. If we can get people to actually stretch, and try to achieve more, and feel more confident in themselves, I think they would do better working independently."

**Blair Taylor, president, Memphis Tomorrow:** "Something I hear quite frequently has to do with the soft skills. I don't think we typically think about teaching soft skills, and making sure they're part of what gets integrated into the high school curriculum. But there is a chorus of issues: lack of conscientiousness,

no follow-through, no ability or commitment to following instructions or completing a task. You can take it from there and move into communication, and talk about problem solving and critical thinking as softer skills. We say, 'Well, that has to do with the parents, and that has to do with the other aspects of their lives, and they're going to learn that somewhere else.' But it's a foundation from which a good employee can emerge. If we're not addressing that, we're missing out."

**Rhodes:** "It's discipline, too. One of the first things we do with our new AutoZoners is make sure they adhere to a dress code. The easiest way to make sure they present a professional appearance, whether they work in a distribution center or one of our retail stores, is to require a dress code."

**Douglas Edwards, CEO, Morgan Keegan & Co.:** "Everybody is describing some societal problems that we may or may not be able to address in the context of what we're talking about here. But getting back to the specifics of coming up with standards ... I can't think of anything more important than developing reading proficiency among our students. Many of us in the business community have specific training programs that address the specific needs within our companies. But all of those programs require prospective employees to be able to read and comprehend the information. So when you talk about basic communication skills, I can't think of anything more important. They have to come to the workplace equipped to understand and comprehend what we're trying to train them to do."

**Bredesen:** "I've had conversations with colleges about the skills people are lacking when they come in as freshmen. It's not really very different from what this group is describing."

**Rhodes:** "Doesn't the accountability have to start with the school? Don't bring the standards to meet the students. Bring the students to meet the standards."

**Bredesen:** "Well, we do have standards that are inconsistent and repetitious. So this is certainly a good

opportunity to go through that from top to bottom and clean it up. But what I found when I was mayor of Nashville is, everybody told me, 'Yes, we have a curriculum that's been approved by this and that and the other, and it's bound up in a book.' Then I say, 'Well, show me the book.' And people would rummage around for a while, and come up with something dusty on the bottom shelf of the office, and no teacher who I'd ever met had seen that particular document. As anybody in business will tell you, the first thing you've got to do to manage somebody is tell them what you want them to do. I think this stuff with standards and curriculum starts out with being real clear with the teachers about what we want them to do. Instead, what we've done is backed into it. So I just want to get it back around to where we're doing it from the top."

**William L. Griffin, senior vice president of global operations, Smith & Nephew Inc.:** "I had an hourly worker (machinist) approach me in the cafeteria – he had been reading U.S. News & World Report, or some publication of that level. He said, 'I read last night that 68 percent of CNC (Computer Numerically Controlled) machines used in the world went to China. How does that impact jobs here in Memphis?' Although we engaged in a very positive conversation, people usually never get that deep into the world economy, how it's growing in different places and how it may affect them as employees in Memphis. Smith & Nephew ships product to 70-plus countries around the globe. Many of our employees don't understand the economics of our global business. Moving overseas is not critical to be successful. We should focus on what the global economy is doing and how we are going to be successful participating in it."

**Bredesen:** "During the time I was mayor, I spent a lot of time trying to help single parents get into the workforce to support their kids. The problem was that they were unconnected to things that we all regard as second, third and fourth nature. One woman, who I was very proud of, got some very good secretarial skills and got lined up for a job interview. She was to call the person for a phone interview, and we were all standing there. All of a sudden, her face got red and

she slammed down the phone. We said, 'What happened?' She said, 'They put me on the radio.' What happened was, she had never been put on hold to music, to a radio station. It was kind of an epiphany to me."

**William Dunavant III, president and CEO, Dunavant Enterprises Inc.:** "Not to pick on Dante and the War of 1812, but if we're teaching that in school versus some kind of real-world application ... which is more important? The War of 1812 or teaching somebody how to listen to a telephone?" ■

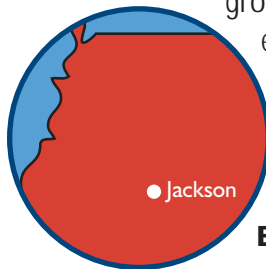
## JACKSON 6.20.07

The Tennessee Diploma Project held its second executive roundtable meeting in Jackson, the economic center of largely rural West Tennessee. Located directly on Interstate 40 between Memphis and Nashville, Jackson is within a day's drive of 75 percent of major U.S. markets. It's a fast-growing manufacturing and distribution hub thanks to major employers like Delta Faucet Co. and Procter & Gamble, maker of Pringles potato chips. Most recently, Jackson became home to a new manufacturing plant for Bodine Aluminum Inc., a subsidiary of Toyota.

Additionally, Jackson is a thriving retail hub serving much of the region. And the community is home to West Tennessee Healthcare, one of the largest non-profit health care systems in the U.S., with hospitals and other facilities in 18 counties. Below are highlights from the Jackson roundtable, hosted by the Jackson Area Chamber of Commerce and Jackson State Community College.

**Governor Phil Bredesen:** "I've never spoken with anyone who's thinking about locating or expanding a plant in Tennessee who won't tell you, in one fashion or another, that having the proper workforce is about as important as it gets in making those decisions. In state government, one of the most important things we can possibly do is to make sure that what we're doing in education is grounded in the real world, that we are training kids with the skills that you need. I really want to involve the business community in this. One, you've got an awful lot of expertise. Two, you represent a way to give continuity and stability to these efforts that will transcend my being in office, or whoever follows me. Let's talk about workforce readiness after high school."

**Mike Rohlwing, plant manager, Delta Faucet Co.:** "On the manufacturing side, we've got 800 employees and 750 are the non-college graduate type. And the first thing we look at in high school graduates is their readiness for work, their readiness to accept responsibility. We're a team-based type of organization."



Margaret Horn, senior management consultant in the Governor's Office of State Planning and Policy, briefs business leaders on the American Diploma Project and shares examples of education standards in Tennessee.

We're about problem solving, goal setting, achievement. Improvements are done functionally as a team and within a work group, and we don't have a high degree of guidance and supervision. So our need is to have a group of people who can work in that type of environment. Where we typically end up succeeding in our employment search is hiring someone who's been in the workforce for a while and learned skills and trades."

**Bredesen:** "Skills like?"

**Rohlwing:** "Come to work on time, handle conflicts, communicate feelings or thoughts either in a written or verbal format, come to work every day — and accept responsibility and accountability knowing that nobody else is behind you."

**Jason Bates, administration manager, Bodine Aluminum Inc.:** "In addition to those issues, we look at specific technical skills, like basic math. Individuals who have a higher level of math skills typically go into the college ranks. The ones who don't tend to be the ones who struggle. But those are important skills that are required for our entry-level positions."

**Bredesen:** "Tell me a math skill that you frequently don't see."

**Bates:** “We measure takt and cycle time, how many seconds it takes to do a certain task. Our employees have to quickly be able to grasp basic arithmetic, and tell how long it takes when you add up different processes to get a total time — 20 seconds and 32 seconds and 46 seconds.”

**Dan Robbins, vice president, Bodine**

**Aluminum:** “We’re testing for these skills before we hire, and our pass rate is only about 25 percent. This is after 50 percent have fallen out just during the application part of the process.”

**Tom Hohs, works manager, Gerdau Ameristeel**

**Jackson Steel Mill:** “We see the same thing. When we’re hiring people, the first thing we’ll do is take a stack of applications and quickly eliminate 50 to 70 percent because of what’s in the application. Words misspelled. No flow to sentences. They don’t have good skills communicating. Basic math skills — understanding sizes, inches, millimeters — are not there. Once you get through the application and interview process, you’re down to a very small pool of people who are qualified even for an entry-level job.”

**Bates:** “Metrics are a big issue in our industry, and more and more manufacturers are getting tighter and tighter about it.”

**Bo Passey, plant manager, Procter & Gamble:**

“From a hard skills standpoint, I see challenges beyond just the basic math skills. Analysis. Statistics. More and more of our business is becoming much more scientific. The days of putting the widget with the widget are gone. Technology would be the other area where we’re finding folks are not capable. We’re not teaching sufficient computer skills in high school. That gap is going to get bigger.”

**Rohlwing:** “I’ve sat at these kinds of roundtable discussions before. For a while, there was a focus on the trade piece. People said, ‘Oh, we need somebody to operate this type of machinery, or who has this exact type of work skill.’ But in our operation, we’ve got a great training program. We teach the actual skills

## SITUATION ANALYSIS

### Economic Indicators

Per capita personal income	\$28,509
Unemployment rate	5.4%
Population	111,937

Based on Jackson, TN Metropolitan Statistical Area (MSA)

### Education Indicators

SCHOOL SYSTEM	H.S. ENROLLMENT	GRADUATION RATE %
Chester County	705	85.2
Madison County	4,124	76.4

Source: U.S. Bureau of Economic Analysis. U.S. Census Bureau, Tennessee Department of Education, Tennessee Department of Labor and Workforce Development

that we need, as far as how to operate this piece of equipment or that type of computer system. What we need are people who have the aptitude and the ability. Basic problem-solving skills are another issue. Our manufacturing and distribution environment averages between 100 and 150 people per manager. We’re talking a flat organization. And that requires all of the people within that group to step up and assume a leadership role to deal with problems, take input and information from multiple areas and be able to process and figure it out. What we need from the public sector, from the education system, are people who are capable, and we’ll take care of the rest.”

**Bredesen:** “As governor, I’ve gotten pressure to invest in new machinery to put in a community college to train somebody in the latest and greatest things. My reaction is, ‘We could never remotely keep up with the variety of changes out there.’ We should concentrate on giving them another set of skills relevant to industry.”

**Passey:** “You’ve got to teach people how to learn.

Because of the rate of change in technology, the skills we need today are not the skills we'll need five years from now. If we can't get folks learning faster, it's going to be a real challenge."

**John C. Clark, president and CEO, First State Bank:** "We use two terms in our hiring: engaged and competent. We want to hire people who are both. It's in the engagement. Sometimes, it never clicks with people why it's important to come to work, get along with co-workers and smile when you give customer service. So I tell our HR people when they're interviewing, 'If you don't see the possibility that the person will be engaged, it doesn't matter what's on their resume or if they've got a 4.0 grade point average.' We feel like we can train a person who's engaged. If they're not, we really are wasting our time."

**Hohs:** "One of the things we're up against goes back to accountability. Are we holding kids accountable for meeting the existing standards and expectations in school? Or are we just letting them slip through? If they're passing these standards, we're not seeing it a lot of time in the applications we receive. It may take us months to find one hourly employee, and we'll take that long if we need to because the cost is too high to keep going through the process."

**Ann Lewis, vice president of human resources, Jackson Energy Authority:** "Even when kids have the knowledge, they have got to actually apply that knowledge in the workplace. If they could figure out how to self-manage, organize and prioritize their time, and do the research needed for problem solving, then maybe they can better transition to the workplace."

**Steve Walzer, human resources supervisor, Gerdau Ameristeel Jackson Steel Mill:** "Changing jobs is an issue. We get a lot of applications from people who have worked three or four jobs in a year, people who have questionable reasons for leaving. If there was a way to get people to see what kind of impact that has, or how that looks ... we will avoid people who have had three or four jobs and left to make a nickel more an hour."

**Bredesen:** "I never had the luxury of just quitting my job when I decided I didn't want to do it anymore. Do they just not work for a while and then find some other job? Do they go work in a less demanding situation?"

**Rohlwing:** "All of the above. They adjust their lifestyle such that they work a while, then take off a while. They'll jump around working for temp agencies, or other manufacturers or industries in a temporary status. They just do a little job shopping."

**Barry Phillips, executive director of human resources, West Tennessee Healthcare:** "One of the things we're grappling with is that we're expecting the school system to do what the home did at one time."

**Bates:** "I agree. Because schools are taking up some of those responsibilities that traditionally are handled by others — whether it's the family or the Boy Scouts or other organizations kids used to be involved in — they are not able to focus on the basic technical or educational skills. My wife is a schoolteacher by trade. She wasn't able to teach the basics because she was dealing with discipline and other issues. While it's important for the schools to teach some of that stuff, you can't expect them to become the parent. If they do that, we're never going to get the skills we need."

**Dana R. Wheeler, president and CEO, Jackson Energy Authority:** "I think a lot about what's good overall for the company, or the team. It used to be that even though we finish our part of the task, then we'll go over and help somebody else in the team finish their task — for the overall good of getting the project done or for the company. The younger generation is more interested in, 'Doing my part and when I get through with it I'm finished.' There is a lack of focus and responsibility on their part to help the team. We need to instill in them the idea that their success, long term, largely depends on the success of others around them."

**Bredesen:** "Is it really different today than it was a generation ago? Has the quality of the workforce really changed dramatically in the last 30 years?"

**Wayne McCreight, president, Hamilton-Ryker Group LLC:** “I believe it has changed because of what we discussed earlier: the family, the work ethic and the thought processes of young people. In my generation, you did what you said you were going to do. If you filled out an application ready to go to work, then you went to work. You did not have an employment gap in your resume. That was forbidden.”

**Robbins:** “Employers’ demands are also changing. I’ve been in the (automotive) business since ’69. At that time, it was just getting vehicles out the door. It was all about the volume. There was no problem solving. But as the competition became stiffer, we had to become better. It’s definitely a different ballgame.”

**Bredesen:** “In the town I grew up in, there was a farm machinery factory where a lot of my relatives worked. It was one of these places where you pretty much showed up at 7 o’clock in the morning and left at 4 o’clock, and in the meantime you put pieces of sheet metal in a punch press, and you could get by with that. I don’t think there are too many of those jobs left. So the workplace has changed a lot, in terms of what it values and what it needs.”

**Bates:** “But those skills we’ve mentioned — dependability and reliability — are still relevant. I consider myself still young, and I’m now hiring people who weren’t even born when I was graduating from high school. And there is a significant change in what they’re willing to do and how much effort they’re willing to put forth. It’s very different.”

**Passey:** “To answer the question a bit differently, I would say that the quality hasn’t changed. I mean, people are people. But I think two things have changed. First, people haven’t learned the appropriate behavior to be successful in life. And second, we are not succeeding in teaching the skills that are needed — literacy, math.”

**Bredesen:** “The thing I’m struggling with is, there are different directions you can take in the school system. But the schools can’t do everything. No organization can. We need to be able to pick some things in the schools and do those very well.”

**Lewis:** “One thing to do well: If schools could partner more with the workforce, in terms of students actually spending time in it. I know they have some limited programs already in existence, but that concept is important.”

**Jeff Thomas, human resources manager, Delta Faucet:** “Louisiana has a struggling education system, but one thing it does well is build partnerships between education and industry, and it has a great number of technical schools. People identify a path that maybe does not involve college. There are apprenticeship programs. A higher percentage of people come into the workforce with skills. And that makes a difference. Right now, we have some very high-paying jobs, and we can’t find the skill sets.”

**Bates:** “Typically, you expect somebody in industrial or mechanical types of roles to have some post-high school training. But young people aren’t going into the trades anymore. Usually, the people you find who have those skills are folks who have been in the industry for 10, 15, 20 years.”

**Bredesen:** “Well, I don’t think our community college system does a wonderful job of aligning what it’s doing with the real needs of the workplace. One thing I’m interested in exploring is any kind of joint effort where a community college can help train people in exchange for some honest attempts on your part to employ them when they’re done.”

**Wheeler:** “Looking back on when I was in college, the best professors I had were the ones who had been in an industry for five, 10, 15 years. They worked for NASA or Oak Ridge or IBM. They made me understand analysis and why the isosceles triangle is important. They made things relevant. I’m not sure how we accomplish that at a high school level.” ■

## NORTHEAST 6.21.07

The Tennessee Diploma Project held its third executive roundtable meeting in Northeast Tennessee, a region whose economy is mainly fueled by a trio of neighboring cities: Bristol, Johnson City and Kingsport. Situated in the heart of Southern Appalachia, Northeast Tennessee's communities are located directly across the border from western North Carolina and southwest Virginia.

Northeast Tennessee has a diversified economy, including significant employment in construction, health care, manufacturing and services. The area is home to one of the country's largest manufacturers, Eastman Chemical Co., which maintains two-thirds of its operations in the region. Rich in cultural resources, Northeast Tennessee is home to attractions such as the International Storytelling Center, Jonesborough, and NASCAR's Bristol Motor Speedway. Below are highlights from the Northeast Tennessee roundtable, held at Eastman's Kingsport headquarters:

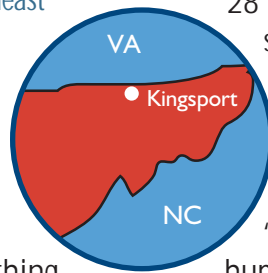
**Governor Phil Bredesen:** "Let's focus for the moment on people coming out of high school into careers rather colleges. What are the weaknesses? What is the most important thing for us to tackle, in terms of improving the skills of who we're sending you?"

**Jeff Jones, director, Citi Commerce Solutions:** "Probably the easiest one to toss out: We're definitely lacking tangible bilingual skills. At this point, Spanish is the primary need. Our customer base is changing greatly. I've been with the company for 20 years, and we went from having no one with this ability to currently having probably 40 FTEs (full-time equivalents), and can definitely use more."

**W. Andrew Burke, president and CEO, Regional Alliance for Economic Development:** "We recently completed a workforce profile and analysis in this region. More than 53 percent of the responding employers reported seeing deficiencies in basic skills,



Eastman Chemical Co. Vice President Paul Montgomery, left, listens as Governor Phil Bredesen discusses bridging the divide between business and public education.



which I think is a wake-up call and an alert for us as we look at the overall education situation. One of the most disturbing things we found was that almost 28 percent of our population did not have a high school education, and that's very serious. I'm in the world of economic development, and I've been doing this for a very long time. In our world, it used to be, 'Where is the cheapest place to do business?' Now it's, 'Where is the best talent pool, the best human capital?' That overcomes everything else. If you can deliver that, then you're going to be in good shape."

**Scott Keys, plant manager, Cooper Standard Automotive:** "Along the lines of math, what we're finding in the manufacturing world is that statistics and probability — which aren't core subjects required for a high school diploma — are absolutely critical in this day and age. The majority of our people on the manufacturing floor come straight out of high school, and we have to start at ground zero with stats and probability before they get where we need them to be."

**Bredesen:** "What kinds of things do you need them to do?"

**Keys:** "Just basics. Means, deviations, understanding

what a Bell curve is, understanding when your process is shifting, understanding what the data is telling you. We have them do measurements and plot, but we have to educate them as to what it's actually telling them, and how to react to it. As I say, it's not advanced."

**Jerry L. Miller, president and founder, Holston Medical Group:** "I've been a family physician in this region for 42 years, and we now have 800 employees. It is a very rare situation when we can take just a high school graduate. I would not say that at all 15 years ago. I know it's easy to sit and point out problems, but let me tell you what bothers me. I'd certainly like to see more emphasis on reading, writing and arithmetic. But where we see so much downfall comes in communication skills. How do you truly communicate with people? Other areas that bother me are real-world readiness, reliability, realistic expectations and responsibilities. When it comes to needs in these areas, health care in my opinion is no different than any other business."

**R.T. (Rab) Summers, president, Summers-Taylor Inc.:** "In our company, to be a supervisor, the number one question is, can you communicate with people in a normal, logical, reasonable way? You can't manage by yelling at people anymore. You have to know how to work with people and understand, communicate with them. That skill is so hard to find."

**Fred Cooper, president, Kingsport Book Inc.:** "We're in a very unique situation. We started out five years ago with five employees. We have 45 now, so we are growing. We've been fortunate that, because of some plant closures, we've been able to reach out and get people that have 25 and 30 and 35 years' experience. Now, we're trying to reach out and get high school educated young people who have some basic skills and who we feel like we can turn into craftsmen as the more experienced guys grow older and retire and move out of the workforce. Basic math is a huge issue. I'm talking about fractions and decimals and working without a calculator. They're dependent on machines to do basic math. Also, social skills — being able to interact with co-workers in their surroundings — are lacking. I know part of that has to come from home, and we as a society have to address that. But I would

## SITUATION ANALYSIS KINGSPORT/BRISTOL Economic Indicators

Per capita personal income	\$27,079
Unemployment rate	4.7%
Population	302,451

Based on Kingsport-Bristol, TN-VA Metropolitan Statistical Area (MSA)

## Education Indicators

SCHOOL SYSTEM	H.S. ENROLLMENT	GRADUATION RATE %
Bristol City	1,191	83.8
Kingsport City	1,804	92.3
Hawkins County	2,343	74.9
Sullivan County	3,766	75.8

Source: U.S. Bureau of Economic Analysis. U.S. Census Bureau, Tennessee Department of Education, Tennessee Department of Labor and Workforce Development

love to see something in the curriculum — either on the vocational side or the traditional side of the high school — that prepares these young people for getting out into the real world. I've probably made mistakes in my hiring practices by ignoring someone who maybe had the skills and the smarts because of the way they presented themselves. That seems to be a trend with young people. It's hurting us and it's hurting them as well."

**Bredesen:** "When you say 'the way they present themselves,' do you mean the way they fill out applications? Is it verbal communication in an interview?"

**Cooper:** "It's both. You look at an application and see words misspelled. Or talk to someone to get their strengths and weaknesses, and you get 'Yeah' or 'No'

## SITUATION ANALYSIS JOHNSON CITY

### Economic Indicators

Per capita personal income	\$26,023
Unemployment rate	4.8%
Population	191,136

Based on Johnson City, TN Metropolitan Statistical Area (MSA)

### Education Indicators

SCHOOL SYSTEM	H.S. ENROLLMENT	GRADUATION RATE %
Elizabethton City	773	87.8
Johnson City	2,028	91.3
Carter County	1,623	87.2
Unicoi County	768	94.0
Washington County	2,900	85.4

Source: U.S. Bureau of Economic Analysis. U.S. Census Bureau, Tennessee Department of Education, Tennessee Department of Labor and Workforce Development

or you can't pull information out of them. I know I sound like my grandfather, but this generation doesn't seem to want to sell itself."

**Mark Lucas, president, Comfort Systems USA Inc.:** "A lot of high school graduates are just looking for a job when they show up. They don't realize what a service technician does, what kinds of social and technical skills that position needs, and what it takes to be able to perform that job. It would be nice if there was more career planning at the high school level so they aren't just dumped into the workplace without a career path and without knowing what's available to them."

**Jerry Hammonds, vice president and general manager, BAE Systems:** "One thing I'd like to see in

the curriculum is a career path determination ... working one-on-one with students to see where they want to go and then have a greater partnership with industry focusing on responsibility, accountability. So that when they go into these situations where they're being tasked to do something that maybe stretches them, they understand that those are things expected by industry."

**Carolyn Ferrell, vice president of administration and human resources, Edwards & Associates Inc.:** "I agree. Somewhere along the way we have lost vocational learning in our high schools. Not everybody's geared up to go to college, but we need those people. We have entry-level mechanics, sheet metal mechanics and avionics installers who don't necessarily need a four-year degree, but it would be nice if they had training in a vocational school, along with communications skills."

**Larry Nunley, CEO and president, Accuforce Staffing Services:** "We processed over 100,000 people to place 11,000 people last year ..."

**Bredesen:** "Tell me why they fell out. What are the big categories for rejection?"

**Nunley:** "Well, of course, no high school diploma or GED. That's a big cross-section. Use of recreational drugs. That's a big knockout factor. But we've also raised our quality standards. Especially over the last five years, we saw our customers' demands increasing, in terms of process improvement that led to new equipment and machinery. So the job is totally different than it was 10 years ago, and significantly different than it was five years ago."

**Arthur S. (Art) Powers, publisher, Johnson City Press:** "I'd like to hop on this parental issue. I'm a proud papa of a middle school teacher who just won the East Tennessee Middle School Teacher of the Year award. We just got back from an event in Memphis, and while I was there I was around a lot of middle school teachers. So I took the opportunity to do my own little survey, and I asked 'What's the single largest problem middle school teachers have in this day and age? To a person, the answer was: 'It's the parents.'"

I don't know what to say, except it's a huge problem. Teachers have a great time in the classroom, they maneuver with the curriculum, they can teach the kids and the kids will learn. But they don't have the support from the parents. I don't know where all that goes, but to engage the parents — whether it's a single parent, grandparents or whatever — it's got to be dealt with."

**Nunley:** "A large part of the responsibility for this communication to high school students, or maybe even middle school students, falls back on us as business leaders. One of the things we've done in the last couple of years is get aggressive in our high-school and middle school outreach program to the point that we actually require all of our managers and staff members to teach JA (Junior Achievement) courses. The ones we teach are from the personal economic section: how to interview, how to present yourself, how to fill out an application. It's in the best interest of the future of our businesses to stay involved."

**Lisa Meadows, president and CEO, Bristol Chamber of Commerce:** "One of the things we hear continually from our members — whether it's small business, manufacturing or health care — is that there is a lack of connection and dialogue between educators and business. You hear from education, 'Businesspeople do not understand what we go through,' and I think they really don't understand what business needs. So I'm hoping this effort will get the two integrated."

**Bredesen:** "What a lot of teachers would say is, 'Yeah, you can criticize me for teaching to the (standard assessment) test. But businesspeople certainly understand about incentives and the way they drive people. If I don't meet those test requirements, I get in a lot of trouble. I don't get in trouble for sending you somebody who doesn't have exactly the skills you want.'"

**Miller:** "I can equate a lot of my success coming from teachers. Math, English and science courses gave me discipline. My point is, what are we expecting of our teachers and, just as important, what are we doing for our teachers? How are we really enfranchising our teachers and giving them the incentive and the

rewards to step up to the task that is so much more enormous today than it was 20 or 25 years ago?"

**Michael Puck, director of human resources, BAE Systems:** "There are lots of forces at work. One is that our challenges in the industry have changed. They have significantly increased. But the other force that we have not really considered is that the generation in school right now is not all that excited about going into the workforce. They're looking for an easy way because a lot of things came very easy during their childhood. They all have TVs, phones, DVDs. I'm not sure that they really want to get into the workforce all that urgently. So my question would be, how do we engage the student? The best curriculum doesn't solve the problem if the student is not engaged and not interested. How do we make it interesting to them?"

**Bredesen:** "One of the rationales for our pre-kindergarten program is precisely that. So many teachers have told me that if a student gets to the end of third grade and they have not acquired the basic skills, they get kind of glassy-eyed and not really engaged. It's not a rewarding experience for them to be at school, and that kind of flops over into a lot of things in life. But conversely, there genuinely is for kids a joy in learning and accomplishment. One of the tricks is not letting these kids get too far off the path so they don't spend the last six years in school just getting by."

**Joel Faidley, controller, EXIDE Technologies:** "We're a tier-one supplier to Toyota. And when they look at a particular company to do business with, they want people who really are process-oriented and who concentrate on teamwork. They really focus on employee engagement. A lot of old-line American companies fall short by not really engaging younger people. We came through the '50s and '60s and '70s when you could hire someone and tell them what to do, and they don't really offer input back to the leadership. We've got to break out of that kind of concept. We can learn a lot from companies that really are taking the initiative. We can engage this workforce to be successful." ■





















































































































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