We live in a hyperconnected world, powered by digital technologies that have burst onto the scene over the past decade. The globalization of markets across developed and emerging economies has led to businesses competing not just at a local or regional level but at a national, and often international, level. Digital technologies are also helping organizations meet their consumers’ demands for responsiveness, knowledge, engagement, and individualized attention. Living in this digital era requires its own set of skills to interact with and use these technologies. Developing solutions to real world problems in this digital era requires a new set of skills and a new way to use those skills.

**OPPORTUNITIES OF A DIGITAL ERA**

Some 80% of the Top 10 Global Internet properties are “Made in USA,” including Google, Microsoft, Facebook, Yahoo, Twitter, and Instagram. Yet, 81% of the users of these properties are coming from outside America. Jobs that once required minimal-to-no technological skills now require working knowledge of programming and information technology. Nearly 90% of smartphones globally are running on operating systems “Made in USA.” At TCS, and within other businesses worldwide, the demand for a “digitally fluent” workforce is increasing dramatically.

“The world economy is in the midst of a tectonic shift from the Internet Economy to the Digital Consumer Economy. Five key digital technologies are driving this shift; Big Data and analytics, cloud computing, mobile and pervasive computing, social media, and robotics and Artificial Intelligence. Individually, these technologies are undoubtedly powerful but, when combined, they have the potential to fundamentally change how enterprises develop products, market themselves and engage with customers across every major industry.”

~N. Chandrasekaran (Chandra),
CEO, Tata Consultancy Services
As a human resources leader in the world's second most valuable Information Technology services company (with more than 300,000 employees worldwide), I see the demand side of this equation up close and personal. The demand for skilled technology talent in the United States will continue to increase in the foreseeable future, and these jobs will include all sectors—banking, financial services, manufacturing, retail, insurance, energy, food, agriculture, high-tech, and more. College- and career-readiness amongst our youth will determine our global competitiveness, our future prosperity, and our ability to meet some of society's greatest challenges in the current century and beyond.

Yet, America is at a crossroads with respect to how the nation's education system will adapt to meet the needs of the economy. U.S Education Secretary Arne Duncan once said that America is “being out-educated,” when referring to the Program for International Student Assessment (PISA) results. As of 2010, American students ranked 17th in science and 25th in math, beaten out by students in countries like China, Poland, and Canada. And while young adults around the world are quickly surpassing their parents' education, America's young people as a whole have merely matched the attainment levels of the previous generation by their mid-30s. Historical experience and research data have shown a close tie between the knowledge and skills of a nation's workforce and the productivity of that nation's economy. We pride ourselves as the greatest nation in the world. Consequently, the world sets the standards that we need to achieve and exceed; the areas of business and education are not exempt or immune to this.

**DRIVING BUSINESS EXCELLENCE FOR COMPETITIVENESS**

In the world of business, standards are a clear and present catalyst, driving productivity, effectiveness, and results that benefit the company, as well as its stakeholders. For example, the Tata group, a global conglomerate and our parent company, has its own Tata Business Excellence Model (TBEM), which is the basis for conducting organizational assessments and for giving feedback to each of the group companies that take part in this annual exercise. The criteria in TBEM have three important roles in strengthening competitiveness:

- Help improve organizational performance practices, capabilities, and results;
- Facilitate communication and sharing of best practices information among organizations of all types; and
• Serve as a working tool for understanding and managing performance and for guiding organizational planning and opportunities for learning.

The criteria are further designed to help organizations use an integrated approach to organizational performance management, resulting in:

• Delivery of ever-improving value to customers and stakeholders, contributing to organizational sustainability;

• Improvement of overall organizational effectiveness and capabilities; and

• Organizational and personal learning.

These values and concepts in TBEM are embedded beliefs and behaviors found in high-performing organizations. They are the foundation for integrating key performance and operational requirements within a results-oriented framework that creates a basis for action and feedback. The TBEM criteria are made up of results-oriented requirements. However, the criteria do not prescribe:

• How each organization should be structured;

• That each organization should or should not have departments for planning, ethics, quality, or other functions; and

• That different units in the organization should be managed in the same way.

These factors differ among organizations, and they are likely to change as needs and strategies evolve. The TBEM is non-prescriptive for the following reasons:

• The focus is on results, not on procedures, tools, or organizational structure. Organizations are encouraged to develop and demonstrate creative, adaptive, and flexible approaches for meeting requirements. Non-prescriptive requirements are intended to foster incremental and major (“breakthrough”) improvements through innovation.

• The selection of tools, techniques, systems, and organizational structure usually depends on factors such as the organization type and size, organizational relationships, the organization’s stage of development, and the capabilities and responsibilities of its workforce.
A focus on common requirements, rather than on common procedures, fosters understanding, communication, sharing, alignment, and integration, while supporting innovation and diversity in approaches.

These standards, in addition to the constant pursuit of excellence, have resulted in the Tata group growing its revenues 10 times in the past 11 years to become a $100 billion enterprise, serving consumers and businesses in more than 150 countries and global leadership in several sectors. By setting expectations and elevating standards across every group company, TBEM provides clear and consistent guidelines for how Tata group companies should approach their business and be able to achieve excellence at each level, eliminating uneven expectations for business leaders.

**Lessons for Excellence**

Lessons from business excellence models (such as TBEM) are fungible, and with adequate customization, can be applied to the American education system. National education standards can be a catalyst to drive student attainment, competitiveness, and college- and career-readiness that benefits the students, as well the nation. In 2010, 45 states and the District of Columbia adopted the Common Core State Standards, a set of math and English language arts standards that spells out what skills students are expected to master in kindergarten through 12th grade. These standards were a step to increase rigor in earlier grades and then build a strong foundation for higher-level English and math courses.

Governors from both political parties, chief state school officials, and community leaders from 48 states met and worked with top education experts and academics to produce the Common Core State Standards, taking into account more than 10,000 pieces of feedback from
individuals, teachers, and organizations. Common Core State Standards are, quite simply, a prioritized, clearly stated list of skills a student must master in each grade level in order to be on track to succeed at college-level work. These new standards are not a curriculum; they set benchmarks for math and English achievement in each grade. The standards are internationally benchmarked and, for the first time in generations, raise the bar for American students to the level of their international peers. Simply put, this was America’s answer to the call for education reform.

With the Common Core State Standards, we have an opportunity to implement what state and community leaders across the country have defined as a stepping stone to education reform. Being non-prescriptive, it provides states and schools with the ability to develop curriculum customized for their local needs while also aligning attainment levels nationally. Assessments are just a means to enable teachers and state and district administrators to identify shortcomings to improve student performance and examine what works. Only by setting clear benchmarks for states and schools can we ensure improvement toward high standards and expectations.

The rest of the world is already marching ahead to create the next generation of educated youth: Canada’s results with increased teacher autonomy; Finland’s world class teacher training; Japan’s ability to relieve student pressure without decreasing student performance; Poland’s structural reform; and South Korea’s success in closing the gap in student achievement between urban and rural schools and advantaged and disadvantaged students.

What we need more than ever is visionary leadership, bipartisan efforts, cross-sector support, resilience in the face of obstacles, and singularity of focus. We owe it to our youth to provide them with an opportunity to gain the skills that will enable them to keep America as the greatest nation in the world.

As the Head of Workforce Effectiveness for Tata Consultancy in North America, Ganapathy oversees the functions of Talent Management, HR Business Consulting, Corporate Social Responsibility, Employee Retention, and Diversity & Inclusion for more than 23,000 employees.

He serves as an inaugural member of STEMconnector’s STEM Innovation Task Force (SITF) that is comprised of 15 innovation leaders in STEM from across the corporate, public, education and government sectors in the U.S.