



Building that Bridge over the Skills Gap

Janani Ramanathan

Senior Research Analyst, The Mother's Service Society, India;
Associate Fellow, World Academy of Art & Science

Abstract

Employers worldwide are seeking and failing to find in new recruits many skills that are critical for success. Skills that enable employees to work as part of a team, communicate effectively, take decisions, lead, adapt to change and solve problems creatively are not often found in fresh graduates. Education does not impart these skills as efficiently as it does academic knowledge and subject-specific skills. A change in the pedagogy and content of education is required to bridge the increasing skills gap we face today. The World University Consortium has identified themes that must be part of our future education, and this article highlights methods and strategies that can implement these ideas.

1. The Glaring Skills Gap

Education may not be the magic formula for solving many of our problems, but it comes a close second. Education raises the employment rate and average income of people and societies. It reduces poverty and fosters economic growth. Indirectly, it promotes health, reduces fertility rates, closes the gender gap, increases awareness of climate change and sustainability, and fosters democracy and peace.*

Almost every country has compulsory, free primary education. We have come to believe in the value of education so thoroughly that a young girl in rural Pakistan stands up for her right to education in the face of threat of violence, and the world awards her the Nobel Peace Prize in recognition of her stance. For 15 years since 2000, the United Nations' Millennium Development Goals inspired countries to invest in their future by raising the quality and quantity of education. As a result, the number of children out of school the world over dropped by half. The Sustainable Development Goals that have succeeded the MDGs aim to ensure free, equitable and quality primary and secondary education for all by 2030. The SDGs also seek to provide access to technical, vocational and tertiary education for all.

Schools and colleges, on their part, provide students with the essence of all the knowledge humanity possesses. They take the sum of all human experience over centuries, abridge and organize it, and provide it to every student over a twelve to sixteen year period, so that each generation can start off with all that every previous generation knew or discovered. Today, we have more schools, colleges, books, research papers and graduates than ever before. Global literacy rate has grown from 12% two hundred years ago to 56% in 1980 to 86% in

* <http://www.globalpartnership.org/education/the-benefits-of-education>

2015. From teaching a few subjects such as Latin, rhetoric and logic, universities today offer specialization in over a thousand disciplines and subdisciplines. The potential of Information and Communications Technology, combined with the perceived threat of Massive Open Online Courses, induces educational institutions to reinvent themselves and provide students with the best learning experience possible.

However, employers are not finding what they seek in graduates. 40% of global employers report talent shortages according to Manpower Group's 2016-2017 Talent Shortage Survey.*

2. Changing Landscape of Work

American inventor, futurist and author Ray Kurzweil said in 2001 that “we won't experience 100 years of progress in the 21st century—it will be more like 20,000 years of progress.” 17 years into the century, all indications are in line with Kurzweil's prediction. We see it in the speed of change and the appearance of a variety of new trends in work and the workspace.

2.1. Technological Advancement and the Need for Lifelong Learning

According to *The Emerging Future*†, technology will advance a thousand times in ten years, a million times in twenty, and up to a quadrillion times more in fifty years. Understandably, graduates believe that the rapid rate of technological and digital advancement is the single greatest challenge in their future careers. A global study conducted by CEMS‡, an alliance of business schools, multinational companies and NGOs, showed that 68% of students and fresh graduates surveyed feel the need to constantly reinvent themselves to stay ahead of the curve.¹ In the Indian technology industry that employs nearly four million people and has revenues of more than \$150 billion, up to three million new positions will be added by 2025. But it would require retraining 60% of the existing workforce.

2.2. Automation

Worldwide, automation and disruptive technology threaten to replace up to 47% of all jobs in the next 25 years. According to researchers at the Future of Humanity Institute at the University of Oxford,² Artificial Intelligence will outperform humans in many activities in ten years. AI will translate languages better than us (by 2024), write school-level essays (by 2026), drive a truck (by 2027), work in retail (by 2031), write a bestselling book (by 2049), and work as a surgeon (by 2053). There is a 50% chance of AI outperforming humans in all tasks in 45 years, and of automating all human jobs in 120 years.

We already see the impact of innovative disruption repainting the landscape. Take for example online ticket booking. Between 1990 and 2014, according to the US Bureau of Labor Statistics, the number of travel agents in the US fell from 132,000 to 74,000. By 2024, the number is expected to decline by another 12%. In 2011, one of UK's largest tour operators

* <http://manpowergroup.com/talent-shortage-2016>

† <http://theemergingfuture.com/speed-technological-advancement.htm>

‡ <http://www.cems.org/>

Thomas Cook faced a cash crisis that threatened its survival and needed a £200m loan. Since then, it has closed hundreds of stores. Another industry, the small component manufacturers and distributors group, is threatened by 3D printers. Bosch Rexroth, the drive and control unit of the private German electronics group, projects that up to 40% of the equipment it uses could be printed instead of purchased in just 5-10 years. This also makes economic sense, equipment manufacturing could become up to 60% cheaper than conventional methods that are now used. Another group of workers, the financial advisers, are facing competition from websites. Since 2012, investors have discovered a free or low-cost alternative in websites that recommend a portfolio of funds to invest in based on the investor's answers to an online questionnaire. Even banks and financial companies recognize the potential of robo-advice and have their own online investment websites. According to Citigroup, the assets managed by these robo-advisers could reach \$5tn globally during the next decade.³

2.3. New Job Descriptions

As it wipes out old jobs and renders some skills unnecessary, this sea change is also creating new careers that demand new skills. The growth in the electric vehicle market threatens the car repair industry. Whereas an internal combustion engine in a car today has several thousand moving parts within it, an electric Tesla car contains 18 moving pieces. Volkswagen aims to make a quarter of its cars electric by 2025, and so needs to retrain 7,000 engineers in electric technology. As more drivers switch to cleaner, cheaper, low-maintenance electric cars, garages and mechanics dependent on servicing and fixing petrol or diesel cars are set to see their business dwindle. But the new cars will come with their own set of needs. Currently, there are 40,000 car after-sales businesses in the UK alone. If these are to change from servicing petrol and diesel cars to battery-operated cars, they will need different expertise.

Of those existing jobs that are not disappearing, many are undergoing transformation that demands a matching change from the people involved in them. Technology-based transport services such as Uber, hospitality service providers like Airbnb, and online sellers like Amazon are forcing traditional businesses to take a relook at their business models.

Starting in the 15th century, the Age of Exploration introduced people to new ideas, beliefs and cultures. It brought to different parts of the world plants, animals, art, technology and practices from other parts of the world. It changed human and social life more rapidly and drastically like nothing before had done. Imagine a virtual age of exploration where a thousand Columbuses and Magellans chart new routes and find unmapped territory in thousands of new dimensions. The factors driving change are numerous and constantly expanding—driverless cars, delivery through drones, online learning, social media, interplanetary travel, the sustainability question, the internet of everything, smart whatnots...!

2.4. Unemployment

Alongside new and exciting developments, unemployment continues to be a major challenge. According to the ILO,⁴ there were 197.6 million unemployed in 2016. This number is expected to rise by 3.4 million in 2017, representing 5.8% of the work force. 2018 will

see an additional 2.7 million unemployed globally. Salaried employment accounts only for about half of global employment. The others are in unconventional, informal employment, with short-term contracts and irregular hours. Even among the salaried workers, fewer than 45% are employed on a full-time permanent basis. 1.4 billion people worldwide remain in vulnerable employment. These are jobs of poor quality, precarious and with limited access to contributory social protection schemes.

2.5. Gig Economy

Another important trend we witness in the job market is the informalization of employment. Part-time and multiple-jobs and self-employment are on the rise. The McKinsey Global Institute estimates that “independent workers”—part-timers, freelancers and those holding multiple jobs—formed 20 to 30% of all employed people in the U.S. and Europe in 2015. The advantages of such employment are the potential to work flexible hours that best suit one’s schedule, the freedom to pick and choose which jobs to pursue, and the ability to determine one’s own interests and strengths before settling down to a career, if one chooses to do so at any point. According to Dan Schawbel, author and research director at executive development firm Future Workplace, by 2020, about 40% of Americans will be part of the gig economy.⁵

2.6. Flexibility

The phenomenon of working from home and outside the office is tied to the gig economy workers. Such an option is beneficial to both sides. Employees can choose their place and time of work. Organizations can cut indirect costs by limiting travel—about a \$100 million annual expense for a \$10 billion American company—and reducing office space. The practice contributes to going green. In the US alone, annual fuel consumption decreased by 680 million gallons in 2013 alone, about 0.5 percent of the nation’s gas consumption. As collaborative technology becomes more reliable, inexpensive and easier to use,* and social media provides an alternative for human interaction, more and more companies are replacing physical meetings with remote technologies.

An online survey of 3000 Generation Y-ers, those born between 1979 and 1997 who form a large majority of the labour force, regarding their work preferences showed that 56% want to work flexibly, 79% prefer to be mobile rather than static workers, and 96% want an environmentally friendly workplace, an issue earlier generations of workers were not so overwhelmingly concerned about. Studies show youth today prefer multi-tasking, working from non-traditional settings such as cafes and lounge environments as opposed to traditional cubicles and office spaces. They seek more autonomy and flexibility. In a Deloitte study† of 1400 CFOs in 2009, 46% said that telecommuting is second only to salary as the best way to attract top talent. 33% responded that telecommuting is the top draw! The need for flexibility is a result of not only a change in the mindset but also a practical need. With organizations becoming increasingly globally distributed, employees find themselves collaborating in real

* Knoll Workplace Research’s Five Trends that Are Dramatically Changing Work and the Workplace https://www.knoll.com/document/1352940439324/WP_FiveTrends.pdf

† Why Change Now: Preparing for the Workplace of Tomorrow, Deloitte Development, 2009, p.3.

time with people in multiple time zones. Regular 9 to 5 office hours are no longer adequate, with online meetings spilling into early morning, evening or late night hours.

“The growing complexity of the work place and the uncertainty of the world around require in every individual a well-formed individuality.”

Among the next generation, the Millennials, 68% of job seekers say an option to work remotely would greatly increase their interest in the employers, according to a survey by AfterCollege*, a career network for students and recent graduates. Gallup’s State of the American Workplace report† finds that 43% of Americans worked remotely part of the time in 2016, up from 39% in 2012. According to the 2015 PGI Global Telework Survey, 79% of the respondents work from home at least one day a week.‡ In a 2014 survey of business leaders at the Global Leadership Summit§ in London, 34% said more than half their company’s workforce would be working remotely by 2020. 25% said more than three-quarters would do so by then.

2.7. The Entrepreneurial Mindset

Entrepreneurialism is growing among Generation Y and the Millennials, as if keeping pace with advancement in technology. There is a connection. Every generation has sought freedom and the ability to work for who, when, where they want, and balance their personal lives with their professional lives. And every generation has come closer to doing it, but due to the advancing communication technology, mobile computing and collaboration tools, it is today’s workforce that is achieving it. A study by oDesk¶ found that today 90% of people think that entrepreneurship is only a mindset, which all can develop. As for actual plans, GoDaddy** finds that 21% of Baby Boomers, 47% of Gen X-ers and 62% of all those who have come after intend to start their own business before 2026. Flexibility is the chief driver of entrepreneurship. 41% of the respondents say it is this option that motivates them to strike out independently, only 17% of the people are influenced by the possibility of making more money.

According to Dr. Marie Puybaraud, Director of Global Workplace Innovation for Johnson Controls, the youth entering the workforce today are, “on the leading edge of transformational attitudes towards work and the workplace ... because they have grown up with the Internet and mobile communications and are digitally, globally and constantly connected. They are driving how mobile communication technologies are used, and they are setting behavioural trends that ripple and influence social behaviour in other generations.” But the paradox is, this

* <https://www.aftercollege.com/cf/2015-annual-survey>

† <http://www.gallup.com/reports/199961/state-american-workplace-report-2017.aspx>

‡ <http://go.pgi.com/gen-genspec-15telesur-SC1129>

§ <https://gls.london.edu/>

¶ Millennials and the Future of Work <https://www.upwork.com/blog/2013/05/odesk-announces-new-study-on-millennials-and-the-future-of-work/>

** GoDaddy Global Entrepreneur Survey: A new era of the entrepreneur, September 20, 2016, <https://www.godaddy.com/garage/godaddy/godaddy-global-entrepreneur-survey-2016-new-era-entrepreneur/>

generation is largely being taught by those who are on an average, not at home on the internet and social media. These teachers studied at a time when information was primarily found in text books and encyclopaedias. Education had been tied to physical spaces such as the classroom, laboratory and library. Their own teachers had been the authority of knowledge. And the world order, politically, socially, economically and technologically, had been vastly different. In many cases, the paradox continues after graduation too. These youth will start their careers in the face of reports that a majority of today's students will be in jobs that do not exist yet, that by 2030 two billion jobs that exist today will disappear, and that they may see signs that read "humans need not apply!" Some of these graduates will be employed by, and need to report to those who have been trained for long years in the absence of information overload and massive interconnectivity.

3. Need for a New Paradigm in Education

The growing complexity of the work place and the uncertainty of the world around require in every individual first of all a well-formed individuality. This includes strength, positive values, resilience, and the capacity for leadership, problem solving, adaptation, and innovation. The World University Consortium* has identified a number of themes that are essential for a paradigm shift in education. Realigning future education along these themes will not only bridge the skills gap that exists today, but also anticipate and prepare our young work force for any situation that they find themselves in in the future.

4. Teamwork and Collaborative Learning

One of the top recruiters of entry-level college graduates in the US is the car rental company Enterprise Rent-A-Car. This company hires a number of college athletes. These new recruits are not intended for any sports-related positions. They are hired because sportspeople, better than most others, know how to work in teams. And the company values the capacity for teamwork in an employee. He/she may be a graduate of mechanical engineering, business administration, classical literature or medieval history. The technical knowledge required to work in the car rental industry can be taught and learnt in a few months. But the ability to work in teams is far more valuable than technical knowledge. It ensures effective communication between people, harmonious relationships between teams, and a smooth work flow throughout the project. It ensures that the collective goal becomes greater than individual recognition. In short, it determines the success of the company itself.

The ability to work in a team is the number one requirement of employers, finds the Job Outlook 2016 survey, conducted by US-based National Association of Colleges and Employers†. This is in startling contrast to the number one requirement in most educational institutions—good individual performance. Students are required to listen to the teacher, take notes, study, complete homework, submit assignments, and finally write an exam—all by him/herself. A group project is an occasional occurrence and not part of the daily routine in

* www.wunicon.org

† Job Outlook 2016, <http://www.nacweb.org/career-development/trends-and-predictions/job-outlook-2016-attributes-employers-want-to-see-on-new-college-graduates-resumes/>

a typical school setting. When the greater part of the educational training we give students is devoid of collaboration, it is not a surprise that the ability to work in a team is one of the most sought after but hard to find skills in graduates.

“Communication skills are not like manual or technical skills that involve only one part of the person. They are the result of the integration of linguistic, intellectual and emotional capabilities, i.e. they reflect the overall development of personality.”

In the early 1990s, business people of the city of Napa, California were unhappy. They were not getting workers with the right qualities. The schools were not producing graduates with the skills needed in the work place. Why not grow our own employees, they asked, and a collaboration between the business community and the educators of the school district was formed. They started looking for a way to prepare students better for work and life, and they realized that a school environment that trains students from childhood onwards to collaborate rather than compete is needed. Out of their concerns and inspiration was born the New Technology High School* in Napa.

The school employs a model that educates the student as a whole, imparting not only academic knowledge but life skills. A culture of respect, trust and responsibility is inculcated in the students. When a decision needs to be taken by the school, the students are consulted too. Students are given the freedom to organize their own projects, and work in groups of their own choice. The curriculum is project-based rather than book-based. The teacher leads the activities in the classroom, rather than lecturing to the class. One of the criteria on which students are graded is their work ethic. Communication is considered important, even in a subject such as Maths. Boldly breaking away from the traditional method of encouraging children to compete with others and come first, they are required to work in mutual cooperation, as they would later at work. This practice lets students see the benefit of replacing competition with cooperation, and instils the habit as part of their culture.

After the success of the school, the New Tech Network was formed, to replicate the successful model elsewhere. This network is one of the fastest growing school networks, and is working with nearly 200 districts and schools worldwide to transform schools into innovative learning environments. Many such successful, visionary models exist all over the world. We need to identify and recognize these and take steps to replicate them.

5. Social Skills and Active Learning

In all human history, we have never been so well connected before. Fiber optic cable, satellite communication, instant messaging, smartphones, social networking and numerous apps that add all possible frills to the business of messaging have left us linked, followed,

* <http://www.newtechhigh.org/>

liked, commented on, retweeted, sometimes even made viral! We are used to receiving instant news as events unfold, watching wars telecast live from the battlefield, seeing sports from every angle using cameras on drones, and participating in global real-time discussion online. We also see more and more people, especially the young, post their personal lives publically on social media, fingers constantly, rapidly texting on their gadgets. But paradoxically, young graduates are found lacking in communication skills. They are unable to listen, understand, give instructions or effectively communicate orally or in writing. This impediment adversely affects work productivity. Aggregating reports of numerous surveys, the University of Kent Careers and Employability Service* concludes that communication skills are one of the top skills that employers want in new recruits.

Communication skills are not like manual or technical skills that involve only one part of the person. They are the result of the integration of linguistic, intellectual and emotional capabilities, i.e. they reflect the overall development of personality. Listening to a teacher's lecture, studying, submitting assignments and writing exams that test one's subject knowledge hardly improve communication skills. Active learning, peer tutoring and project-based learning help improve communication skills. This is one expression of a person-centered approach to education that shifts emphasis from the subject to development of the skills, capacities and personality of the students.

6. A Global Exposure from Online Learning

Online education, Massive Open Online Courses, badges and newer forms of accreditation and evaluation are the only way to simultaneously rapidly increase accessibility, affordability and quality of higher education at the global level. The idea of distance education is not new, but advances in ICT make it possible to do much more than has been ever done before. Schools and colleges can supplement their classes with the best lectures available anywhere in the world. Regions that suffer from shortage of teachers can now gain access to the teachers in the top most colleges. Scaling up an online class of 30 to a class of 30 million or more is possible. Syllabi can be updated constantly, the latest in every field can be taught. Students have an extensive range of subjects they can study. They can learn from the university or lecturer of their choice. Online forums and webcasts allow interaction and peer learning at the global level. Online education is not without major hurdles and fierce opponents, but its advantages outweigh the limitations of the field.

Apart from knowledge, learning in a virtual global classroom offers one a wider perspective than is possible otherwise. This is essential in today's global work space. Employers are increasingly finding global perspective a much-needed skill in workers. Massive interconnectivity makes it imperative for everyone to know and be sensitive about regional differences. Needs, perspectives, problems and cultural conditions vary from region to region. One needs skills to comprehend and factor in these complexities in order to succeed in the global environment. Online education, apart from providing students with the best of knowledge that is available anywhere in the world, also gives these skills. When one learns from a lecturer say half way around the world, and has as his/her classmates people of all age

* <https://www.kent.ac.uk/careers/sk/top-ten-skills.htm>

groups, backgrounds and professions in tens of other countries, and interacts with them, receives feedback from them, reviews their work, and learns from the process, one enters the workforce with a much-needed global exposure.

Hybrid learning using the flipped classroom model takes advantage of both online and the classroom model. It makes the best use of the high quality open resources by combining them with in-person classroom discussion. If more and more schools and colleges invest in the basic infrastructure required to log in to the global classroom, they improve the quality of their own education, educators and their students.

“The cultivation of individuality in every person is the ultimate aim of education.”

7. The CEO Mindset

The speed and complexity present everywhere compel everyone, be he/she a fresh graduate newly recruited or a senior level employee, to think like a CEO. Problem-solving capacity, decision-making skills, values, entrepreneurialism and leadership are required in everyone. Employers today look for the ‘CEO-mindset’ in all.

Manpower Group’s *The Flux Report** states that leadership skills are seen as the most important skills needed for employees in order to drive growth. Similarly, more than 80% of responding employers in the Job Outlook 2016 survey said they look for evidence of leadership skills in recruits. An education that has as its core focus the imparting of facts, even if it goes by the name of information, knowledge, or wisdom, and evaluates its own effectivity by requiring students to write down what they have understood and remembered, meets, as Sir Ken Robinson famously said in his TED talk†, only the needs of industrialism.

The CEO-mindset does not come from understanding and remembering facts alone. We need a workforce that does not wait for instructions. We can no longer afford to be taken by surprise by unexpected changes. We need people who, if they cannot anticipate changes, are at least always expecting them and are ready for them, even if they don’t know what those changes will be. Those who can adapt and evolve continuously. Reid Hoffman, Executive Chairman of LinkedIn, described entrepreneurship as being able to jump off a cliff, and build a plane on the way down. It is such people who are needed, whether they work for themselves or for another. People who can direct change. Who can create their own jobs. Who can convert challenges into opportunities. The one term that captures all these qualities and capabilities is Individuality.

The cultivation of individuality in every person is the ultimate aim of education. An individual who is responsible and self-directed. Individuality is the foundation for original thinking, innovation, creativity, and entrepreneurship. An education that is based on respect for the uniqueness of each student, and strives to awaken the interest and curiosity of the

* Manpower Group’s The Flux Report, <http://www.rightmanagement.co.uk/thought-leadership/research/the-flux-report-building-a-resilient-workforce-in-the-face-of-flux.pdf>

† <https://www.youtube.com/watch?v=iG9CE55wbTY>

student to learn. According to the American psychologist Carl Rogers, the fully functioning person develops as a result of self-discovered learning. This ideal is achieved not by passive attendance of lectures. A broader view of education is required, one that shifts from traditional lectures to active, student-centered, self-paced, collaborative methods of learning. The teacher no longer shapes or moulds the student. He/she recognizes the individual differences in interests and talents among students, and lets them develop according to the laws of their own nature. Their inner capacities are allowed to develop to their fullest extent. Such individuals, those with the much sought after CEO-mindset, take decisions based on their own standards rather than be influenced by others' opinions or conform to social norms. They take responsibility for their own actions. Their individuality enables them to identify with the larger society, they have a positive relationship with it and act in a manner that is conducive to its progress.

“An educational program that is flexible and personalized instead of being an assembly line creates unique individuals. A world that celebrates uniqueness (not simply rebelliousness for the sake of non-conformity) nurtures creativity.”

8. Creativity

Besides individuality, if there is one other quality that is critical for the future, of education and everything else besides, it is creativity. We do not know what jobs will disappear, what new ones will appear. We do not know what new fields of study will be offered, what changes will be brought about in the job market and the work place. We do not know if governments, nations and existing organizations will look the same. What climate change, rising sea levels and depleting natural resources will have done to our ecosystem. What the next revolution will be. How population will grow, and societies will function. How much reality will resemble the science fiction of today, or be a throwback to the past. In such a fluid scenario, it is not a degree in a subject nor a doctorate that one needs. At most, the certificate may enable one to survive. But to utilize the opportunities that are made possible by changes and new developments, to thrive and grow, what everyone will need is creativity.

IBM asked 1500 CEOs from 60 countries across 33 industries what they consider the most crucial factor for future success, in its 2010 Global CEO Study*. The number one answer received was creativity. Creativity, somewhat like love or infinity, rightly defies any definition. George Bernard Shaw describes his creativity thus: “You see things; and you say, ‘Why?’ But I dream things that never were; and I say, ‘Why not?’” So, we need children to say, why not, and continue saying so always. More than fulfilling an aesthetic need, creativity is critically needed for the future we cannot predict. We need to teach students how to learn. This way, we equip them to adapt, learn and continuously evolve.

* <https://www-03.ibm.com/press/us/en/pressrelease/31670.wss>

According to Mara Swan, Executive Vice President, Global Strategy and Talent, Manpower Group, employability depends less on what you already know and more on how well you can learn, apply and adapt. Business and life are complex and integrated and becoming increasingly so. They do not lend themselves to understanding or effective action based on compartmentalized, fragmented, piecemeal analysis and initiative. An education that is transdisciplinary, contextual and relevant to every individual student makes most meaning to all, and instils a love for learning and curiosity to know. A system that encourages, not punishes mistakes, allows one to experiment and innovate. An educational program that is flexible and personalized instead of being an assembly line creates unique individuals. A world that celebrates uniqueness (not simply rebelliousness for the sake of non-conformity) nurtures creativity.

These creative people invite disruptive innovation, and even encourage others to think freshly, none less than Albert Einstein said creativity is contagious. Creative students and workers are comfortable with ambiguity and experimentation. They think independently and laterally, and challenge conventions and assumptions. They are courageous to make decisions that challenge the status quo.

Human creativity is an inexhaustible spring from which new ideas, social innovations and material progress emerge endlessly. We are inherently creative. Unfortunately, some of our educational institutions stifle creativity in favour of standardized, conformist behaviour. Creativity must be a learning objective in the academic curriculum. Educators need to exhibit an open attitude, free of preconceived ideas. They need to suspend all judgement and encourage questions from students. This will create a positive, secure learning environment that is inspiring, stimulating and supportive of creativity.

Just the two values, individuality and creativity, between them have the potential to create, at the personal and collective level, a workforce that can confidently face the future, even create the future as we would like it. Incidentally, the skills gap will also be bridged.

Author contact information

Email: harish.janani@gmail.com

Notes

1. Nick Morrison, "Rapid Technological Change Is The Biggest Threat To Global Business" *Forbes* February 9, 2017 <https://www.forbes.com/sites/nickmorrison/2017/02/09/donald-trump-is-not-the-biggest-threat-to-global-business/#7883d20b1b73>
2. Katja Grace et al., "When Will AI Exceed Human Performance? Evidence from AI Experts," *ArXiv* (2017):1-21 <https://arxiv.org/abs/1705.08807>
3. "Five industries under threat from technology" *Financial Times* December 26, 2016 <https://www.ft.com/content/b25e0e62-c6ca-11e6-9043-7e34c07b46ef>
4. *World Employment and Social Outlook: Trends 2017* (Geneva: International Labor Organization, 2017) http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_541211.pdf
5. James Manyika et al., *Independent work: Choice, necessity, and the gig economy* (New York: McKinsey Global Institute, 2016) <http://www.mckinsey.com/~media/McKinsey/Global%20Themes/Employment%20and%20Growth/Independent%20work%20Choice%20necessity%20and%20the%20gig%20economy/Independent-Work-Choice-necessity-and-the-gig-economy-Full-report.ashx>