

Environment Matters

Environments impact behavior more than most people realize



Traditional work environments dictate predictable behaviors. And, those behaviors limit the productivity of participants. But changing the environment alone isn't enough to get people to behave differently - let alone be productive. What is needed is a change in the environment and a change in the process, the way of working, in order to realize the true potential and value employees and participants can bring to the table.

Conference rooms are mis-designed for their actual use. One interesting consideration for conference rooms is an understanding of how the space affects the posture of the people in it – and how that can influence their behavior.

Creating a certain environment has a direct and measurable influence even if your employees are never consciously aware of it.



Source: Various

The Drone Revolution

More unmanned aerial vehicles to take to the sky



Simply put, a perfect storm is slowly starting to develop. A new platform is available to device makers that want to build drones for consumers at a more cost-effective rate than they're accustomed to. Meanwhile, major companies are finding ways to bring drones into their product mixes while lobbying the government to move more quickly on adopting regulations that would ultimately allow them to more freely roam the skies. All signs, in other words, point to drones becoming big business in the next few years.

Source: Fortune

Catalyst | Concept Cards

Whether it's Google, Amazon or Sony, some of the world's largest companies are keen on launching their own drone business.

One may argue, however, that a drone revolution is already underway. Mary Meeker, partner at Kleiner Perkins Caufield Byers, believes the consumer drone market will grow 167% year-over-year, while worldwide drone shipments could reach 4.3 million units in 2015, netting total revenue of \$1.7 billion by year's end.

Several tech companies are now vying for control of the market. Sony in July announced a collaboration with Japan-based ZMP to start a joint venture called Aerosense. The company will develop a platform for drone technology aimed at enhancing the usability of drones in the corporate world.

Some of the world's largest technology companies are also investing heavily in drones. Last year, Google acquired Titan Aerospace, a company that was building drones designed to stay aloft for extremely long periods of time. Amazon is currently testing a similar service, called Prime Air, that would deliver packages to customer homes.

And, the market for consumer-flying drones is alive and well. DJI, 3DRobotics, and Yuneec, among others, offer higher-end drones that consumers can buy and fly.

Internet of Things Adoption

Industry is 12 months out from mass IoT adoption, says IDC



“Momentum continues to grow and our survey shows that it is seen as strategic to the enterprise,” said IDC IoT senior vice-president and research fellow Vernon Turner.

“IDC’s 2015 survey shows the regional differences in terms of awareness, adoption and plans for implementation,” added IoT and mobile vice-president Carrie MacGillivray.

A full 58% of respondents to IDC’s survey said they considered the IoT a strategic initiative, with 24% viewing it as transformative. Healthcare, transport and manufacturing were the most likely to see the IoT as strategic to their businesses.

Source: Computer Weekly

The internet of things (IoT) is beginning to show clear signs of picking up rapid momentum, according to analysts at IDC, who have revealed that 73% of decision-makers have already deployed an IoT system of some kind within their business, or plan to within the next 12 months.

IDC’s latest research said the potential of the IoT would be realised not in homes but in enterprises, both in terms of volume spending and the total number of endpoints connected to the internet, which is rapidly heading into the billions.

As other studies that have gone before have shown, the IoT is seeing the most traction in manufacturing industries, where machine-to-machine (M2M) communications are an established element of a factory IT environment, and in retail, where IT departments are rushing to adopt innovative services to win back traffic from online rivals.

Job Matching and Independent Contractors

A plethora of new tools match jobs with independent contractors.

The Future is NOW

Today a large number of startups are built around systems which match jobs with independent contractors on the fly, and thus supply labor and services on demand.



Happening in San Francisco & New York.....NOW

Young professionals who work for Google and Facebook can use the apps on their phones to:

- get their apartments cleaned by **Handy** or **Homejoy**.
- Get groceries bought and delivered by **Instacart**.
- Clothes washed by **Washio**.
- Flowers delivered by **BloomThat**.
- **Fancy Hands** to provide them with personal assistants who can book trips or negotiate with the cable company.
- **TaskRabbit** to send somebody out to pick up a last minute gift and use **Shyp** to giftwrap & deliver it.
- **SpoonRocket** to deliver a restaurant quality meal to the door within 10 minutes.



>The obvious inspiration for all this is Uber.

Eden McCallum, which was founded in London in 2000, can tap into a network of 500 freelance consultants in order to offer consulting services at a fraction of the cost of big consultancies like McKinsey.

The Los Angeles based **Business Talent Group** provides bosses on tap for companies that want to tackle a specific problem without adding another senior executive to the payroll

So... what does this tell us?

Source: Fast Company

Freelancers are a growing workforce. There are now almost 54 million Americans freelancing, an increase of 700,000 over last year. That's more than a third of the American workforce. Millennials, as I've argued before, are native freelancers, and it shows: They are freelancing at a higher rate than any other group.

Independent workers are freelancing by choice. Survey respondents told us that they're freelancing because of the flexibility, freedom, and balance that it offers. In our survey, 60% of respondents said they started freelancing more by choice than by necessity, compared to last year's figure of 53%.

As the "1099 economy" continues to grow, more and more professionals are taking their talents on the road and finding freelance or contract-based gigs with a wide variety of companies. A few sites enabling the freelance economy - matching jobs to contractors include:

- 99Designs
- Aquent
- Flexjobs
- Freelancer.com
- Guru
- Krop
- Upwork
- Total

3D Printed Tissue

With new technologies allowing tissues to be created, is it too far fetched?



There is big money coming into these programs from some major drugs companies, who see it as a way to safely test their products without being forced to use human guinea pigs or resort to animal testing. L'Oréal, Merck and Procter & Gamble have invested heavily in the creation of skin cells to test their products. Merck is working particularly closely with Organovo to produce liver and kidney tissues. With such substantial investment, and as the technology and our understanding advances, these seemingly small advances will only grow exponentially, which will completely transform healthcare as we know it.

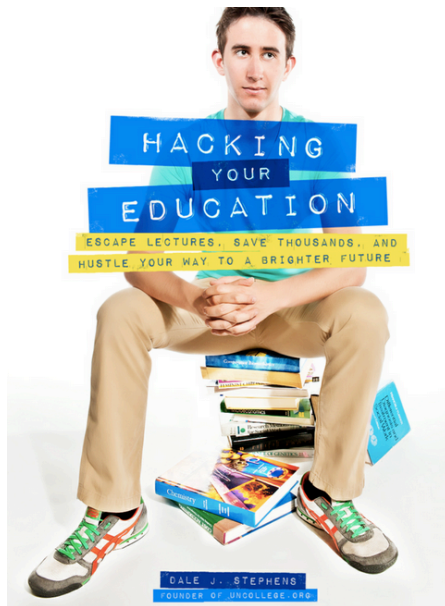
Source: Innovation Enterprise

Richard Dawkins once said in an interview with the LA Times: 'I'm fascinated by the idea that genetics is digital. A gene is a long sequence of coded letters, like computer information. Modern biology is becoming very much a branch of information technology.' To that end, 3D printing human organ tissue feels like the logical consequence of how biology is being re-imagined in the age of Big Data.

The idea of 3D printing functioning organs may sound like the stuff of science fiction, but it's slowly becoming a reality. With an ageing population putting an ever greater strain on the supply of organs, this is not before time, though the idea of growing an organ from scratch is not a new one. 3D printers have been used for some time for skin grafts, and researchers have previously used lab animals as hosts to grow functioning organs for people in need of transplants. However, the idea that they could be printed sounds both quicker, less horrifying, and a more scalable operation.

Hacking Education

Students choosing to build their own education to save money and for the material



Mark Cuban captured it well: “Going to a 4 year school is supposed to be the foundation from which you create a future, not the transaction that crushes everything you had hoped to do because you have more debt than you could possibly pay off in 10 years.” As the most recent Internet Trends Report from Mary Meeker highlights, more and more people are turning to MOOCs for their knowledge fix.

Mary Meeker called the rise of MOOCs “education being democratized.”

Source: Wired

With the skyrocketing costs of higher education and the increasing availability of online resources, smart people around the globe are “hacking their education.” And there are tons of great ways to do that.

Examples of companies providing alternative pathways to learning and skills.

Coursera: An education company that partners with the top universities and organizations in the world, Coursera offers courses online for anyone to take – for free.

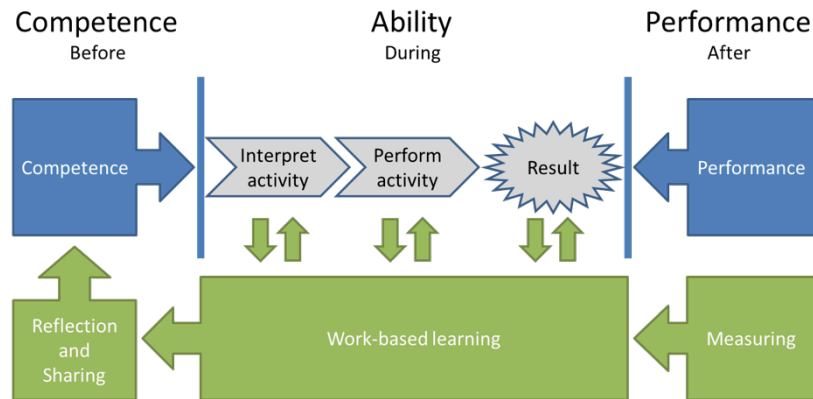
Upgrade Capital: Students are invited to compete with each other to see who can write the best trading algorithm. Winners get access to hiring managers at top hedge funds.

Khan Academy: Khan’s unique teaching style spawned a thousand copycats, but his quality of content and breadth of topics keeps his site going strong.

Codecademy: One of the several sites out there aimed specifically at teaching coding skills. Science, technology, engineering, and math skills (STEM) are in particularly high demand, and coding proficiency is a ticket to a STEM job.

Work-Based Learning

Extending the classroom experience into the workplace



In addition to the core academic and technical components of a pathway, students must also have a comprehensive and effective work-based learning experience that is connected to what they learn in the classroom. This exposure helps sharpen students' desire to increase knowledge and develop skills that are relevant to their career interests. These work-based learning opportunities can take the form of job shadowing, intensive internships, virtual apprenticeships, and school-based enterprises.

Source: Various

Work-based learning activities extend the classroom into the workplace, connecting acquired knowledge and skills to a student's future employment. Students who participate in work-based learning may experience a number of benefits including

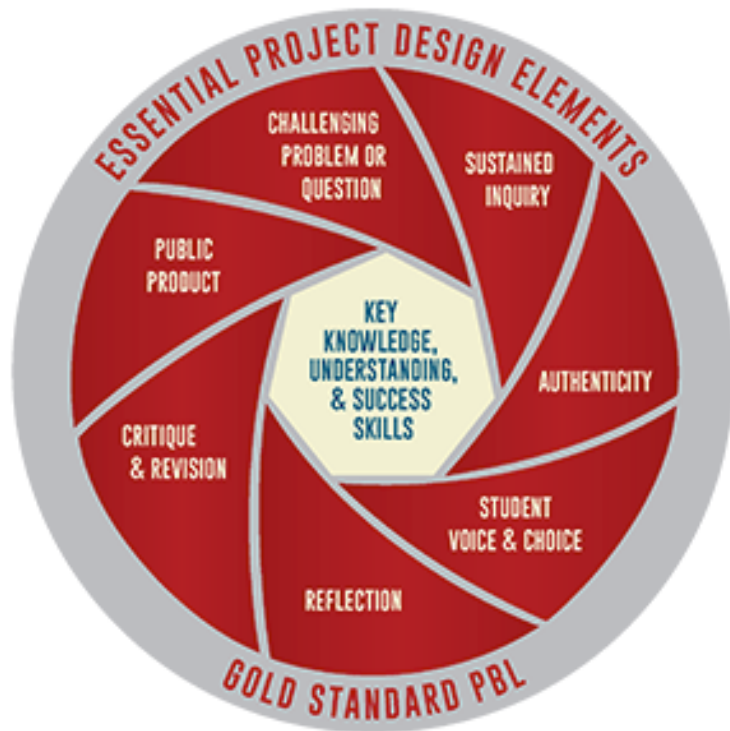
- Show improved academic achievement.
- Realize the relevance of their education and apply acquired knowledge in a meaningful way.
- Have the opportunity to explore career options.
- Increase self-confidence.
- Acquire real workplace experience and employability skills.
- Connect with an adult role model.
- Be more likely to go on to some type of educational training after high school.

Work-based learning can take a number of different forms including:

- Guest Speakers
- Structured Field Trips
- School-Based Enterprises
- Job Shadows
- Worksite Learning

Project Based Learning

Project Based Learning can yield great results when done well



Project Based Learning's time has come. The experience of thousands of teachers across all grade levels and subject areas, backed by research, confirms that PBL is an effective and enjoyable way to learn - and develop deeper learning competencies required for success in college, career, and civic life. Why are so many educators across the United States and around the world interested in this teaching method? The answer is a combination of timeless reasons and recent developments.

Source: Buck Institute for Education

Project Based Learning is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an engaging and complex question, problem, or challenge.

It's not enough to just "do projects." Today's projects need to be rigorous, engaging and in-depth, and they need to have student voice and choice built in. Such projects require careful planning and pedagogical skill. Successfully implementing project-based learning (PBL) can enable teachers to not only help students meet standards but also greatly improve their instruction and make school a more meaningful place for learning.

PBL can have powerful effects, including

- increased student motivation and preparation for college, careers, and citizenship;
- better results on high-stakes tests;
- a more satisfying teaching experience; and
- new ways for educators to communicate with parents, communities, and the wider world.

Youth Unemployment

Coalition commits to hiring 100,000 disconnected youth



"What we've learned over these last many years is that rules of philanthropy, the rules of engagement have radically changed," Starbucks CEO Howard Schultz told USA TODAY. "You really have to build a coalition of like-minded organizations and people who have the kind of experience and skill base and local knowledge to tackle a problem as complex as this."

"If we allow the cultural and economic divide to continue to widen, I think we're going to be facing significant social issues that are greater than the ones we have today," Schultz said. "That's why it's so vitally important that we recognize that this cannot be business as usual."

Source: USA Today

Catalyst | Concept Cards

A coalition of executives from some of the nation's largest companies, spearheaded by Starbucks CEO Howard Schultz, pledged to hire 100,000 young Americans who have been shut out of the job market.

The 100,000 Opportunities Initiative, which launched July 2015, aims to give a leg up to some of the estimated 5.5 million Americans, ages 16 to 24, who aren't employed or in school. Demographers and economists refer to the group as "disconnected youth."

Schultz, who pledged this year to hire 10,000 such youth by the end of 2018, is being joined by top executives from 16 companies who will look to hire young people for apprenticeships, internships and part-time or full-time jobs.

In addition to the Seattle-based Starbucks, Alaska Airlines, Cintas, CVS Health, Hilton Worldwide, HMSHost, JCPenney, JPMorgan Chase, Lyft, Macy's, Microsoft, Porch.com, Potbelly Sandwich Shop, Taco Bell, Target, Walgreens and Walmart have signed on. The coalition is looking to recruit more companies to join the push.

Blending Learning

Combining traditional methods with online/technology media



Transforming a mishmash of educational technologies into a coherent “blended learning” model is fast becoming the holy grail of modern education. With so much software and hardware already in place, making blended learning work is less about acquiring technology, and more about changing mindsets.

A crucial step toward blending learning is realizing that “blended” does not necessarily mean “high-tech and/or Web-based.” “Many people equate blended learning with online learning — all digital, all the time. Blended learning is a balance between digital and classroom learning. The balancing point may vary from student to student. Blended learning allows for variation supported by digital tools.”

Source: THE Journal

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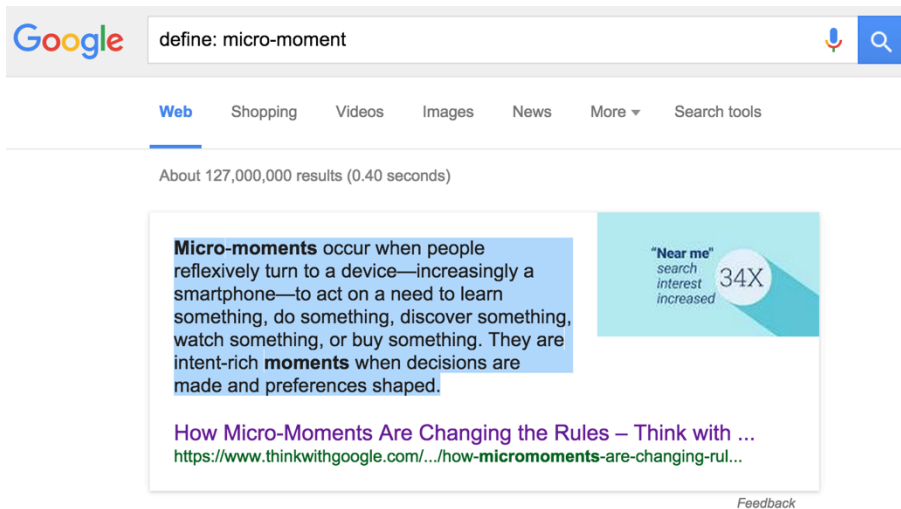
Blended learning is a formal education program in which a student learns at least in part through delivery of content and instruction via digital and online media with some element of student control over time, place, path, or pace.

“We will never have all of the devices, all of the access points, the perfect content, the perfect classroom setting, and all the stars aligned in just the right way,” Susan O. Moore, supervisor of blended learning at Meriden Public Schools (CT) said. “What we will always have are students who are counting on us as education professionals to lead the way, and that starts with a first step.”

“Number one is maximizing technology in courseware,” said Robert Pilkington, the superintendent at Village Green Virtual. “Number two is maximizing teacher efficacy in the face-to-face role, and three is providing supreme equity in access for all kids with a rigorous, high-quality curriculum.”

Micro Moments

Micro Moments are the new battleground for brands



Mobile has forever changed the way we live, and it's forever changed what we expect of brands. It's fractured the consumer journey into hundreds of real-time, intent-driven micro-moments. Each one is a critical opportunity for brands to shape our decisions and preferences.

Immediate action

Smartphones allow us to act on any impulse at any time. We take immediate action whenever we want to learn, find, do or buy something.

Demand for relevance

When we act on our needs in-the-moment, our expectations are high and our patience is low. This makes the quality, relevance, and usefulness of marketing more important than ever.

Loyal to needs

Our preferences and purchases are shaped in these micro-moments. Ultimately, the brands that do the best job of addressing our needs in each moment will win.

82% of smartphone users turn to their phone to influence a purchase decision while in a store.

62% of smartphone users are more likely to take action right away toward solving an unexpected problem or new task because they have a smartphone.

90% of smartphone users have used their phone to make progress toward a long term goal or multi-step process while "out and about."

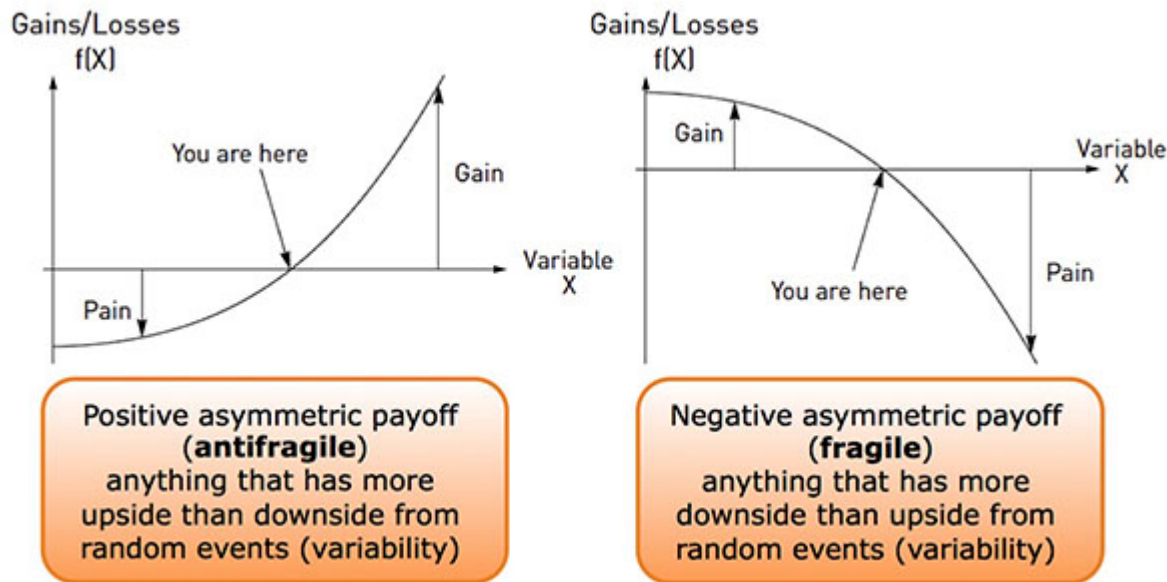
91% of smartphone users turn to their phone for ideas while doing a given task.

Source: Google

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Anti-Fragility

Micro Moments are the new battleground for brands



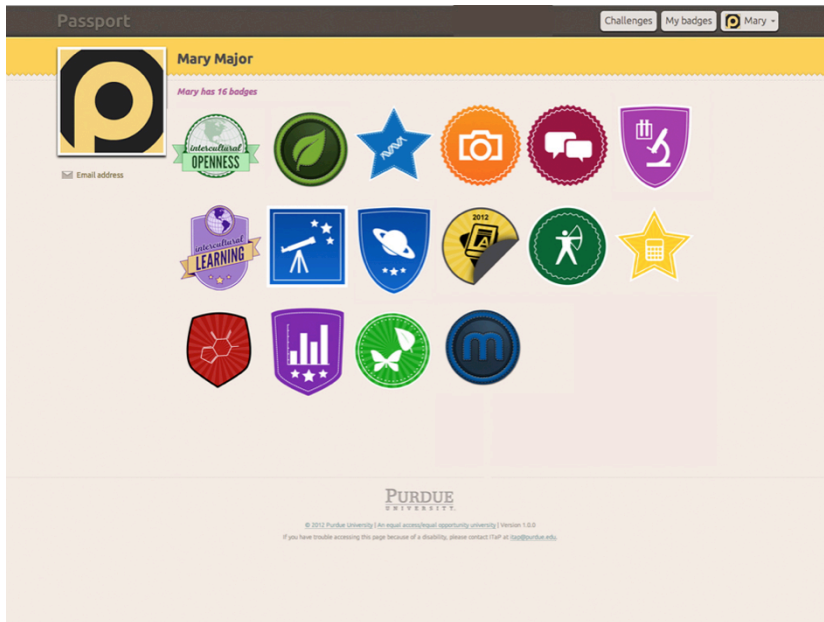
“If you have more than one reason to do something (choose a doctor or veterinarian, hire a gardener or an employee, marry a person, go on a trip), just don’t do it. It does not mean that one reason is better than two, just that by invoking more than one reason you are trying to convince yourself to do something. Obvious decisions (robust to error) require no more than a single reason.”

Source: Various

Antifragility is a concept developed by Professor Nassim Nicholas Taleb, and a term he coined in his book, *Antifragile*. Antifragility refers to systems that increase in capability, resilience, or robustness as a result of mistakes, faults, attacks, or failures. As Taleb explains in his book, antifragility is fundamentally different from the concepts of resiliency (i.e. the ability to recover from failure) and robustness (that is, the ability to resist failure). The concept has been applied in risk analysis, physics, molecular biology, transportation planning, engineering, and computer science.

Digital Badges

Digital badges show students' skills along with degree



"Badges become a way to recognize learning in all of its forms," Kyle Bowen, director of informatics in Information Technology at Purdue says. "Passport provides a platform for anyone who wants to deliver learning credentials. From creation of the challenge to creating the actual badge image itself, and then a way to display earned badges, it's all built into the platform."

Digital badges, icons that represent academic achievements or skills smaller than a college degree, are an increasingly popular way for universities to acknowledge the breadth of student learning.

Open Badges, an open source initiative by Mozilla, is a new online standard to recognize and verify learning. This platform enables learners to collect badges from multiple sources, online and off, into a single backpack and then display skills and achievements on social networking profiles, job sites, websites and more.

Passport, a new classroom app created by Purdue University, allows instructors and advisers to give students digital badges to indicate mastery of skills. The application uses Mozilla's Open Badge infrastructure and is available for use by instructors at any institution.

Open Badges can be Earned, Issued and Displayed.



Source: Various

The Digital Learning Plan

NC's brand new Digital Learning Plan is generating buzz in schools and at the capitol



“A lot of people tell us that these kinds of digital initiatives get written at the Capitol, when the focus should be on engaging stakeholders at every level,” said Jenifer Corn, the director of evaluation programs at the Friday Institute for Educational Innovation.

The overall goal of the DLP is to make it easier for everyone to come to grips with a digital world, no matter what their role in education. “The model that we developed, it could certainly be applied to other states,” Corn, said. “This is about changing the role of the teacher in the classroom, changing the way school works. It’s not about the devices or the technology.”

Like every state, educators in North Carolina are struggling with complex demands around digital learning.

In the era of personalized learning-meets-BYOD, and with a big push on 21st century skills, districts and education leaders can still feel pretty isolated as they work out where to go next. And conveying their needs to state legislators, who often have the power to regulate funding and set the pace for any statewide digital initiatives, can be yet another challenge.

The DLP is, in part, a response to two new state laws passed in the last legislative session — that schools must transition to digital resources by 2017 and that colleges of education, teachers, and administrators would be responsible for meeting new digital competencies.

The Friday Institute developed an ed-tech rubric and assessed every district’s digital progress. “For the first time,” Corn said, “we have a snapshot of where every district in the state falls along a continuum about where they thought they were in terms of readiness in technology.”

Source: eSchoolNews

Hot Desking

There's a new office craze called "Hot Desking." Guess what it is.



Even at Deloitte, opinions appear to be split about how successful this is. In 2013, a partner at Deloitte Consulting told Business Insider that a similar management concept, the so-called activity-based workplace, was rarely "successfully implemented in its entirety, due mainly to the sheer number of variables at play."

Source: Slate

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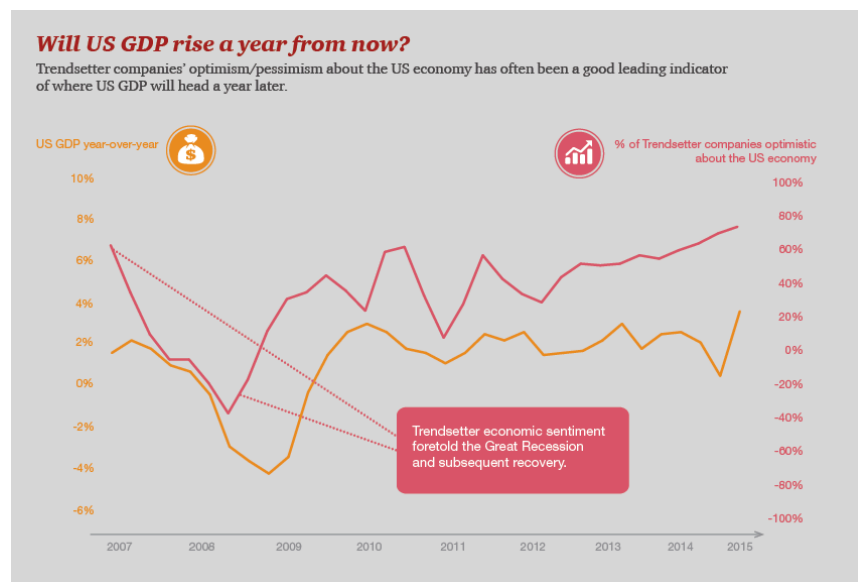
In a new office building called "the Edge" that is supposedly the 'greenest' in the world, the consultancy Deloitte is using a trendy office concept known as "hot desking." What is hot desking?

The practical goal of hot desking is to distribute too few desks among too many people, in a sort of never-ending office musical chairs. The management-jargony goals, on the other hand, are to "encourage new relationships," "chance interactions," and "efficient use of space." At the Edge, Deloitte is doing this with 1,000 desks for about 2,500 workers, which means 2,500 people who don't really have their own desk. But they do have ... a locker?

Find a locker with a green light, flash your badge, and it's yours. Don't get too attached, though: Employees are discouraged from keeping a single locker for days or weeks, because part of the het nieuwe werken (new way of working) philosophy is to break people away from their fixed locations and rigid ways of thinking.

Economic Trendsetting

Private companies provide leading indicators on where the economy is headed



As US private companies go, so goes the nation. It's a good line. And, as it happens, we've got the data to back it up — 20 years' worth. That's how long we've been interviewing private-company leaders for our quarterly Trendsetter Barometer® survey.

So what are private companies predicting for the year to come?

Hiring: More companies are looking to take on new hires, but offer modest wage increase

Growth: The number of companies reporting increased margins is at a 20-year peak, and they don't plan to slow down

Borrowing: There has been an uptick in loans while interest rates remain low and credit is available

International opportunity: Companies selling in emerging markets predict a 13% growth rate, compared to 9% forecasted by US-only peers — a consistent post-millennium gap

“We're more interested in long-term growth in niche areas than in short-term generic growth,” says Jeff Prosinski, VP and CFO of 130-year-old J.M. Huber Corporation — a sentiment we hear from many private companies.

“Private companies tend to be the innovation leaders and jobs engine of our economy,” says CNBC contributor Ron Insana in sizing up the impact of privately held businesses and the importance of what they tell us each quarter in our Trendsetter survey. They're also growing nearly three times as fast as US GDP, but you don't see them broadcasting this in annual reports or publishing quarterly earnings.

Source: PwC

Is College Worth It?

Recent grads less likely to agree college was worth cost

38%

Graduates who **Strongly Agree** college was worth the cost.

Amid the heated debate about the costs and benefits of higher education in the U.S., and the finding that recent graduates are less likely to believe their education was worth the cost, the Gallup-Purdue Index brings some positive news: Higher education leaders and other stakeholders have opportunities to increase their university's value to undergraduates. They can do this by focusing on factors that help students make the most of their college years. Key among these factors are relationships with people who can help students stay fully engaged in their education and focused on the future it will help them achieve. In particular, faculty and other mentors can foster these student goals.

Source: Gallup

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Amid recent controversy over rising tuition and mounting student debt totals, half of college graduates in the U.S. (50%) "strongly agree" that their undergraduate education was worth the cost. This figure varies only slightly between alumni of public (52%) and private nonprofit (47%) universities, but drops sharply to 26% among graduates of private for-profit universities.

Recent graduates, those who have obtained their bachelor's degree beginning in 2006, are significantly less likely to strongly agree with this statement. Only 38% of recent alumni strongly agree their education was worth the cost.

Among the most important results from this year's study is the conclusion that having had supportive relationships with faculty members and other mentor figures powerfully influences graduates' estimation of their college experience. Specifically, alumni's strong agreement with any of the following three statements almost doubles the odds that they unreservedly believe their education was worth the cost:

- My professors at [University Name] cared about me as a person.
- While attending [University Name] I had a mentor who encouraged me to pursue my goals and dreams.
- I had at least one professor at [University Name] who made me excited about learning.

Virtual Campus Tours / Field Trips

This startup puts the ‘reality’ in Virtual Reality with VR livestreams



We've developed virtual tours of places such as Machu Picchu and Harvard University. Eventually, the company envisions renting out or selling its camera rigs. "VR has been around for 40 or 50 years, but the hardware and the software are finally getting there, so that's what makes the experience great," said co-founder of YouVisit Endri Tolka.

Source: The Next Web

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Right now, it's a forgone conclusion whether VR will be a major source of entertainment technology within the next year. If the introduction of the sub-\$100 Samsung Gear VR and the high competition between Oculus, Sony, Google, HTC and others over developing the perfect approach to entering the consumer market didn't convince you, then look no further than the content partners already primed for the medium.

Netflix, Twitch, and Facebook will all bring entertainment content to VR, in different and interesting ways. But it's not just the giants that will help drive VR forward — it's content created and shared worldwide.

YouVisit, a bootstrapped company that started out in 2009, was one of the early developer backers of the Oculus, and has created a library of virtual tours. Everything from Harvard University to Machu Picchu has been designed as a sort of novel way to immerse yourself into a place.

Right now we have apps in the Android Store, iTunes, so anyone with a smartphone can see a lot of the VR experiences we're creating." Tolka said.

The tours themselves show the value of real-world content — not just virtual or game spaces — on VR, but it's the next phase in YouVisit's work that is most intriguing. Currently, the company has developed 4-, 7- and 14-camera rigs for video content, with the smaller two optimized for livestreaming. The rigs capture 4K video at 60fps for an accessible livestream available via desktop and mobile.

Virtual Campus Tours / Field Trips

Google virtual-reality system aims to enliven education



“There was very little precedent for using this technology in schools,” Ben Schrom, a product manager for Google Apps for Education, said last week. “We really feel we are breaking that cycle of giving schools yesterday’s technology.”

Source: The New York Times

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As part of a class last year on “Romeo and Juliet,” Jennie Choi, an English teacher at Mariano Azuela Elementary School in Chicago, took her sixth-grade students on a tour of Verona, the Italian city where Shakespeare’s play transpires.

During the excursion, Ms. Choi asked her class to examine the variegated facade of a centuries-old building, known on tourist maps as “Juliet’s House,” where the family that may have been the inspiration for the fictional heroine once lived. She also encouraged her sixth graders to scrutinize the deteriorated tomb where they could imagine the Juliet character had died.

In 2006, for instance, Google introduced Apps for Education, a bundle of cloud-based email, calendar and document-sharing products available free to schools.

Last year, Google introduced Classroom, a free app that teachers can use to create, collect and comment on student assignments. This month, Facebook announced that company engineers were working with Summit Public Schools in California on software to customize learning to individual students.

The idea of virtual field trips is not new. Some teachers have for years used Microsoft’s Skype videoconferencing service to take students on tours of important places or to invite outside experts to virtually visit their classrooms.

Google’s virtual field trip system, though, is more immersive. And it adds to the array of Google tools that make far-flung places more discoverable — albeit filtered through Google’s lens.

Gender Gaps in STEM Learning

Social and cultural barriers discourage STEM for girls and minorities

What factors do you think contribute to STEM gaps among girls, minorities and students with special needs?

- Low student interest: 10%
- Lack of knowledge about the broad range of careers included in these fields: 10%
- Lack of exposure to role models: 15%
- Not enough programs targeting these students: 14%
- Social and cultural barriers that discourage students from pursuing these fields: 41%
- Curriculum geared toward the general student population: 10%

According to projections from the US Department of Commerce, by 2018, more than 1.2 million STEM jobs will go unfilled for lack of skilled workers. How can your school or district better train students to fill these openings—and what can outside agencies do to help?

Source: SmartBrief

Businesses and trade associations can help foster a more diverse workforce in science, technology, engineering and math (STEM) fields through outreach programs with schools, according to a recent month-long STEM survey from SmartBrief on EdTech.

Sixty-seven percent of readers polled said they would **like to see more career events, mentoring, internships and job training programs on STEM opportunities open for females, minorities and students with disabilities**

SmartBrief on EdTech's STEM survey, which presented a different poll question to readers each Wednesday in September, found that **34% of respondents reported that STEM skills are a primary focus for their school or district. Forty-three percent indicated that STEM skills are somewhat important for their school or district.**

When it comes to cultivating interest in STEM among girls and minorities, 51% of respondents stated that their schools/districts have programs in place designed for this purpose. Yet, social and cultural protocols prevent many of these students from pursuing STEM opportunities, according to 41% of respondents.

Emerging Technology Transforming K-12 Education

What technology will have the biggest impact on schools and learning?



One of the key challenges educators face is how to integrate these technologies into education. That context is important for educators to understand in order to make decisions on the future, said CoSN's CEO Keith Krueger, at the outset of the session.

"Emerging technologies always draw a crowd. But as leaders we need to focus on solving real educational problems," he said.

Source: The Consortium for School Networking

CoSN (the Consortium for School Networking) the premier professional association for district technology leaders recently held their 2015 conference. During that conference they explored what the future holds for education technology (specifically, what emerging technology are on the horizon to impact k-12 schools)..

One year or less (2015–2016):

- BYOD
- Cloud computing
- Makerspaces
- Mobile learning

Two to three years (2017–2018):

- 3D printing/rapid prototyping
- Adaptive learning technologies
- Information visualization
- Learning analytics

Four to five years (2019–2020):

- Badges/Microcredit
- Drones
- Visual data analysis
- Wearable technology

But some of these technologies have already carved niches for themselves in today's classrooms.

Partnerships for Better Outcomes

Jobs and learning partnerships grow interest in CTE and raises standard of living



“We’re seeing a huge increase in the number of students that are taking career ed courses and are what we call ‘concentrating,’” Rich Katt (state director for career education with the Nebraska Department of Education) said. *“Part of that is caused by an intense effort we’re doing around career counseling to help young people really think about their career choices, around their strengths and what they want to do. Really trying to help them understand the career opportunities that are here in Nebraska so we keep them here.”*

Source: KVNO News

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Vocational or career-oriented education is on the rise in schools across Nebraska. The popularity of this alternative curriculum is spreading faster than some school districts can keep up.

The push to keep students in Nebraska has led school districts to work directly with the Nebraska Department of Economic Development to determine what Nebraska industries are prospering the most and then adjust curriculum accordingly.

“We have to look at what’s coming, what the needs are for some of those industries,” said Linda Black, targeted industries manager for the Department of Economic Development. “All jobs are important. You never want to say one’s more important than the other. But there are jobs, there are opportunities that give folks a better discretionary income and raises their standard of living. When we raise the standard of living across the state with the better paying jobs and better benefits it raises the boat for all of Nebraska.”

“One of our largest issues in career education in the state is the availability of qualified teachers,” Katt said. “In particular, we have severe shortages in skilled and technical sciences, or what used to be called industrial technology or industrial education. Those areas like automotive, building constructions, welding. I think we had about 15 schools this year that could not find a teacher.” Katt said the DoE has implemented a series of new programs to address the shortage of teachers for career education. The most popular has been the career education permit. While not a full teaching certificate, it would allow someone with significant industry experience – for example a certified welder – to bring their experience into the classroom. An applicant would then go through a four day ‘crash course’ in teaching.

The Racial Achievement Gap

Study finds students underperform in schools with large black populations



"I think that we all have some sort of anecdotal sense that racial isolation or the resegregation of schools going in that direction is not a good thing," says acting NCES Commissioner Peggy Carr. "It's not good for anyone. But being able to define it and put your finger on it ... and be more diagnostic about the probable impact was really eye-opening for me."

Source: US News and World Report

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As concerns mount over the resegregation of the nation's public schools, a new federal study shows that black and white students at schools with a high density of black students perform worse than those at schools with a lower density of black students.

The report, released in September 2015 by the National Center for Education Statistics, the research arm of the U.S. Department of Education, sheds new light on the achievement gap between white and black students and bolsters policymakers' fears about the ramifications of increasingly segregated schools.

The report found that, on average, white students attended schools that were 9 percent black while black students attended schools that were 48 percent black.

Achievement was lower for both black and white students in schools where black students accounted for more than 40 percent of the student body, compared to schools where black students accounted for less than 20 percent of the student body.

Those findings weren't entirely unexpected. But what did surprise was that the achievement gap for black students was largely due to the performance of black male students, not black female students.

Black males actually did worse in schools with a high density of black students while white males did better, compared to schools with lower densities of black students.

Online Teacher Book Clubs

Promoting a culture of professional development



"I like the online book clubs because I could read and respond at the times that were convenient for me, yet I still had the opportunity to share and learn from others." (Teacher feedback)

Source: Edutopia

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Creating a culture of sharing and professional dialogue is an essential element for school success. Teachers who read, discuss, and implement current educational research are more engaged and ready to take on the challenges in their classroom. But the reality is that teachers lead busy lives, making it difficult to find time for these valuable discussions.

Creating an online book club for sharing ideas can invigorate teachers and encourage professional reading and conversations. One advantage is that a blog is always available anywhere that a teacher has web access.

The success of your book club and blog will increase if you have a moderator. His or her main role is setting up and overseeing the blog. Many books have discussion guides that can be purchased or downloaded online. These guides assist the moderator with creating discussion topics to post. He or she will post discussion questions that follow the schedule shared with teachers, and respond to questions on the blog or in person if a teacher is having trouble adding a comment. Periodically, set up a face-to-face meeting before or after school, or even during lunch, where teachers can share their ideas in person in addition to the conversations that have occurred online.

Teachers will participate a multitude of ways when you establish an online book-sharing community. Some teachers will post every time a new discussion topic is shared, and some will monitor the posts of others and only post occasionally.

Historic Look at School Accountability

The evolution of school accountability - and there is still more to go



As a senator, Robert F. Kennedy argued during debate over the bill to evaluate the progress of all students. Emerging as a voice for the poor and left behind, Kennedy said during a 1965 Senate hearing on the law:

“I think it is very difficult for a person who lives in a community to know whether, in fact, his educational system is what it should be, whether if you compare his community to a neighboring community they are doing everything they should be, whether the people that are operating the educational system in a state or local community are as good as they should be.

“...I wonder if we couldn't have some system of reporting...through some testing system that would be established (by) which the people at the local community would know periodically...what progress had been made.”

Source: George W Bush Institute

As the debate over testing intensifies, it is important to remember how the concepts behind annual exams arose — and to understand if they still matter.

In 1954, the Supreme Court famously struck down *Brown v. Board of Education* decision. In theory at least, the color of a student's skin would no longer determine the school they attended.

Within a decade, the search for justice gave birth to another big idea: Not only would racial walls come down on campuses, no longer would it be right to have major gaps between the academic achievement of white and minority students. This muscular notion led to the Elementary and Secondary School Act of 1965, which later became known as the Elementary and Secondary Education Act.

The law embodied the belief that schools in disadvantaged communities would receive the resources to provide their students a decent education.

Arising from this big idea came another revolutionary concept. School districts and campuses would be held responsible by policymakers and taxpayers if they did not provide a decent education for every student. This idea came to be known as school accountability, and it was built around three principles: Creating rigorous academic standards, measuring student progress against those standards, and attaching some consequence to the results.

Continuous Partial Attention

Paying partial attention continuously as a way of being / staying connected



Continuous partial attention (CPA) is the process of paying simultaneous attention to a number of sources of incoming information, but at a superficial level. The term was coined by Linda Stone in 1998.

The younger generations are on the leading edge of thought for the coming dominant attention paradigm. This is one of the many reasons why the most successful companies are likely to effectively recruit, employ, incent, and manage representatives from every generation and keep an active listening channel toward the ideas and ideals, and the habits and passions of the younger generation.

When I've interviewed 18-22 year olds, I notice that they are often using communications technology in a mode that I call "semi-sync." It's not quite synchronous and it's not really asynchronous communication either. Text messaging is often used in a semi-sync way. When Jyri Engestrom, Jaiku co-founder, demonstrates Jaiku, he describes semi-sync usage patterns. Meanwhile, Matt Webb, in collaboration with Nokia, is experimenting with interfaces that ease the stress of continuous partial attention. Jyri is actively looking at ways to manage activity streams as well as interoperability issues.

Source: Linda Stone

Continuous partial attention describes how many of us use our attention today. It is different from multi-tasking. The two are differentiated by the impulse that motivates them. When we multi-task, we are motivated by a desire to be more productive and more efficient. We're often doing things that are automatic, that require very little cognitive processing. We give the same priority to much of what we do when we multi-task — we file and copy papers, talk on the phone, eat lunch — we get as many things done at one time as we possibly can in order to make more time for ourselves and in order to be more efficient and more productive.

To pay continuous partial attention is to pay partial attention — CONTINUOUSLY. It is motivated by a desire to be a LIVE node on the network. Another way of saying this is that we want to connect and be connected.

Like so many things, in small doses, continuous partial attention can be a very functional behavior. However, in large doses, it contributes to a stressful lifestyle, to operating in crisis management mode, and to a compromised ability to reflect, to make decisions, and to think creatively. In a 24/7, always-on world, continuous partial attention used as our dominant attention mode contributes to a feeling of overwhelm, over-stimulation and to a sense of being unfulfilled. We are so accessible, we're inaccessible. The latest, greatest powerful technologies have contributed to our feeling increasingly powerless.

Digital Natives

What does it mean to be a digital native?



“Students today,” Prensky wrote in 2001, “are all ‘native speakers’ of the digital language of computers, video games and the Internet.” By contrast, “Those of us who were not born into the digital world but have, at some later point in our lives, become fascinated by and adopted many or most aspects of the new technology are, and always will be compared to them, Digital Immigrants.” (The typical birthdate cited for “digital native” status is 1980 and after.)

By 2020, Prensky predicts people across the globe will be plugged into the “AORTA,” -- Always On RealTime Access -- a term coined by Mark Anderson, the chief of the Strategic News Service -- specializing in technology news. A future in which people are constantly able to access information and news from anywhere on the planet.

Source: CNN

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In a 2001 article written by the education consultant Marc Prensky he surmised the arrival of digital technologies marked a “singularity” that changes everything so “fundamentally” that there’s “absolutely” no turning back. This singularity has caused a schism in the population, especially in Prensky’s area of concern, the realm of education reform.

Prensky says that at no time in history has technology moved so fast. Today the latest high-tech gizmos can be passe even before hitting the shop floors.

In the past -- during the post-industrial revolution era, for example -- accelerating technology has plateaued. So, with the meteoric rise of new social media outlets including Facebook, Twitter, YouTube and Skype, history suggests the world is overdue for a slowdown.

But Prensky says this time, any slowdown in the digital age is a “myth,” as innovation will only press forward “faster... And faster and faster.”

He told CNN: “We are not going through a transition to another faze of stability, and that is the key point. People will always be behind now and that will be a stress they have to cope with.”

Stackable Credentials

A new education model for industry-specific career pathways



*As Jim Clifton, author of *The Coming Jobs War*, has argued, the next worldwide challenge is the “war for good jobs,” a challenge he believes will be met only when businesses and educational institutions collaborate to not only fill jobs, but make jobs. As a result, job-specific education and training will be essential for students who will not go on to college or who will go directly from high school to the workforce. It must also be a key priority for business leaders who want to ensure a steady pipeline of trained, work-ready employees to fill the jobs of the 21st century.*

Source: Jobs for the Future

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The United States spends over \$400 billion a year on postsecondary education. By most measures, the country is not getting a good return on this investment. Too many U.S. students emerge from our secondary and postsecondary educational institutions without the knowledge, skills, or credentials necessary to meet the challenges of the 21st century’s increasingly global and technology based jobs market.

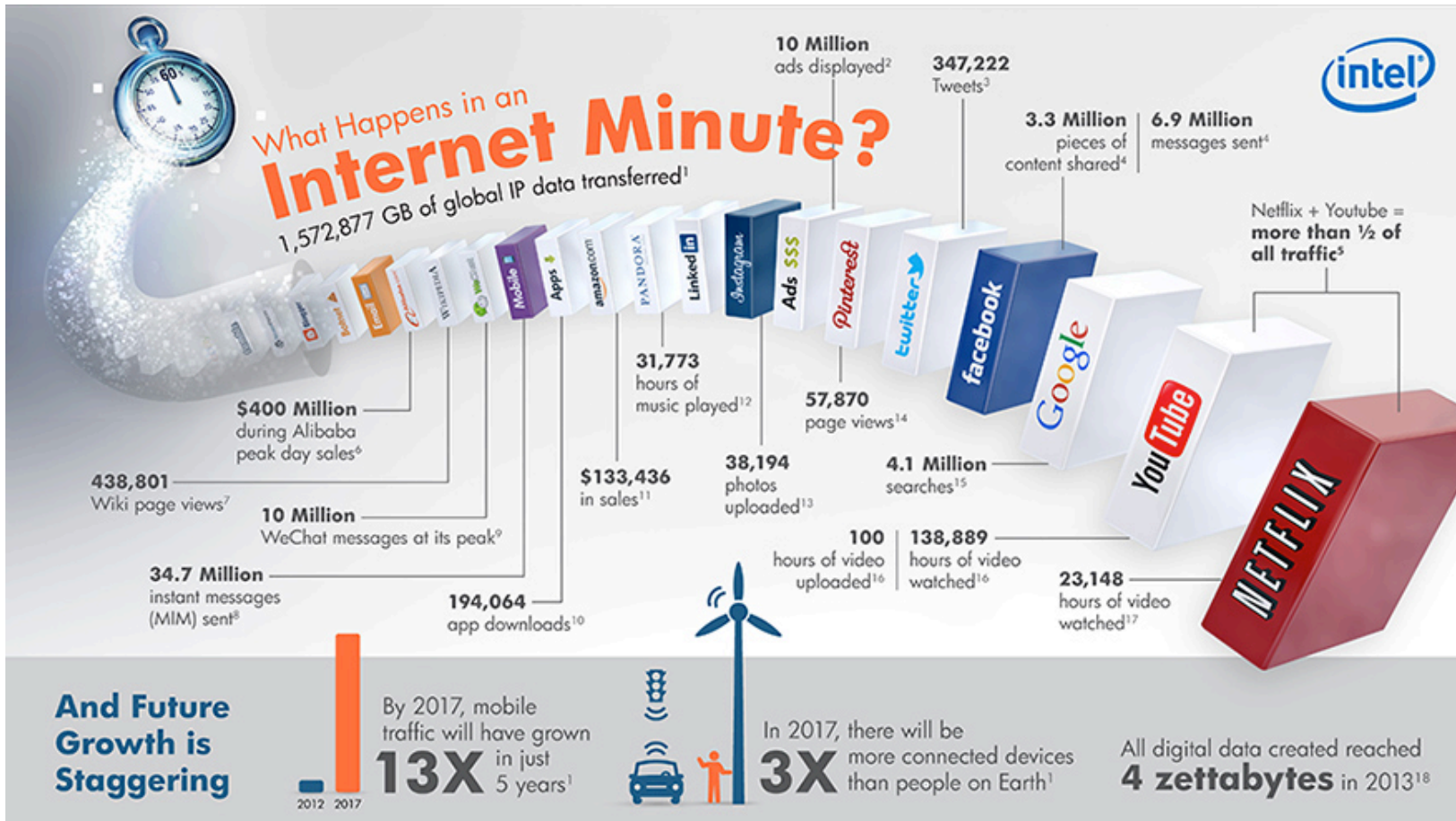
A new system of well-designed career pathways could address more effectively the demand-side needs of employers and the supply-side needs of individual workers.

At the core of such a system are portable and stackable credentials that enable students of all ages to build careers with family-sustaining, middle class incomes. In such a system, students have the opportunity to both learn and earn by acquiring shorter term credentials with clear labor market value even as they continue to build on these to access more advanced jobs and higher wages. And employers, educational institutions, and students can have confidence that the credentials they are working towards are recognized across the country and perhaps even around the world.

<http://www.jff.org/publications/portable-stackable-credentials-new-education-model-industry-specific-career-pathways>

What Happens in an Internet Minute?

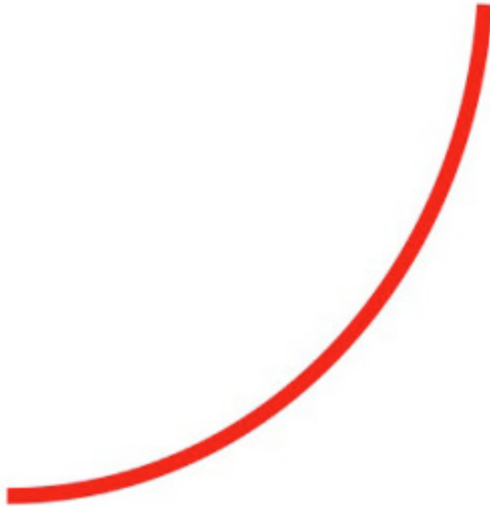
In 2013, four zettabytes of data were created by digital devices. In 2017, it is expected that the number of connected devices will reach three times the number of people on earth.



Source: Intel

Moore's Law

Since 1965 computing power has doubled every 18 to 24 months (approximately)



"Moore's law" is the observation that, over the history of computing hardware, the number of transistors in a dense integrated circuit has doubled approximately every two years.

NOTE: 10/2/2015 IBM's Research division says it has discovered a way to replace silicon semiconductors with carbon nanotube transistors, an innovation that Big Blue believes will dramatically improve chip performance and get the industry past the limits of Moore's law.

In 1965, computer scientist and Intel co-founder Gordon Moore calculated the year to year progress that had been made during the brief history of computer chips, and he realized that as a result of scientific and technological innovation, the capacity of chips to perform computing functions was doubling roughly every year.

So over the course of fifty years since Moore first made his calculation, the computing power of chips has doubled about 25 times, and the table above shows us that today's computers are probably therefore about 16 million times more powerful than the computers of 1965.

And what if the progress underlying Moore's Law is sustained for another decade? Then look at what's likely to happen! For a computer a decade hence is likely to be 32 times more powerful than the computer of today, and a gargantuan 530 million times more powerful than the computer of 1965!

Source: InnovationLabs

School Based Enterprise

Hands-on learning laboratories provide practical learning experiences



“School-based enterprises are effective educational tools in helping to prepare students for the transition from school to work or college. For many students, they provide the first work experience; for others, they provide an opportunity to build management, supervision and leadership skills. While some in the education community have only recently discovered the value of school-based enterprises, marketing educators and DECA advisors have used them as a powerful teaching tool for more than four decades.”

Source: DECA

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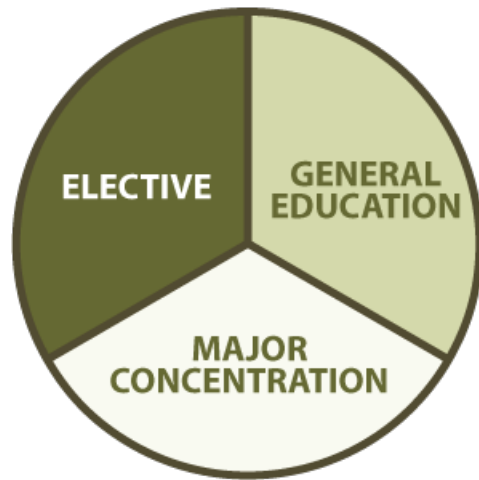
A school-based enterprise (SBE) is an entrepreneurial operation in a school setting that provides goods/ services to meet the needs of the market. SBEs are managed and operated by students as hands-on learning laboratories that integrate National Curriculum Standards in marketing, finance, hospitality or management.

SBEs provide realistic and practical learning experiences that reinforce classroom instruction. SBEs can sell to consumers through a permanent location, a mobile kiosk or through Internet marketing. Products may include spirit wear, food and beverage items, school supplies, signs and banners and more, while other SBEs provide services such as creative design, advertising sales and more.

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Demise of Elective Courses

Decreasing public high school elective programs



Based on statistics and information from World Music Central, while the programs are declining, a Gallup poll in 1993 reveals that over 95% of Americans think electives, specifically music, are essential and beneficial for a child's development.

In fact, hundreds of conducted studies and statistics support this belief. For example, according to a profile of SAT data, "Students with coursework/experience in music performance and music appreciation scored higher on the SAT: students in music performance scored 57 points higher on the verbal and 41 points higher on the math, and students in music appreciation scored 63 points higher on verbal and 44 points higher on the math, than did students with no arts participation."

Source: Public School Review

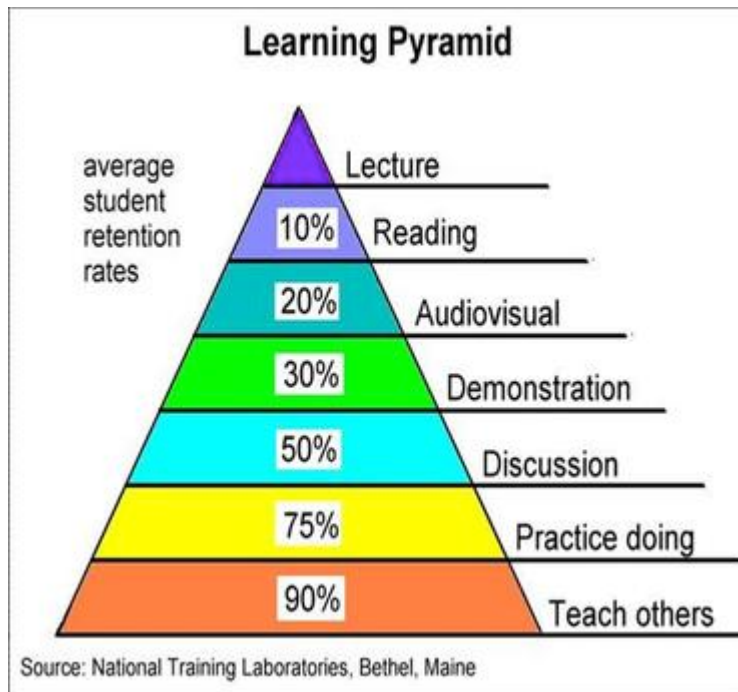
An elective course is one chosen by a student from a number of optional subjects or courses in a curriculum, as opposed to a required course which the student must take.

As the demands and requirements for high school students are shifted towards core classes, such as English, math, and science, high schools across the country are losing money and funds for elective courses. As a result, programs in the arts, music, and other creative realms are dwindling.

This not only stimulates a loss in opportunities for students, but it also stimulates a loss in jobs for teachers across the country. Specifically, according to the National Education Association, in New York City alone, over 233 elective teachers of athletics, music, and the arts were laid off due to issues of funding, testing, and a dwindling social respect for the arts and creative courses.

Authentic Assessment

Applying knowledge and skills to real-world tasks



Many teachers find that authentic assessment is most successful when students know what teachers expect. For this reason, teachers should always clearly define standards and expectations. Educators often use rubrics, or established sets of criteria, to assess student work. Because authentic assessment emphasizes process and performance, it encourages students to practice critical-thinking skills and to get excited about the things they are learning. Try it in your classroom!

Source: Teacher Vision

Authentic assessment is the measurement of "intellectual accomplishments that are worthwhile, significant, and meaningful," as compared to multiple choice standardized tests. Authentic assessment can be devised by the teacher, or in collaboration with the student by engaging student voice.

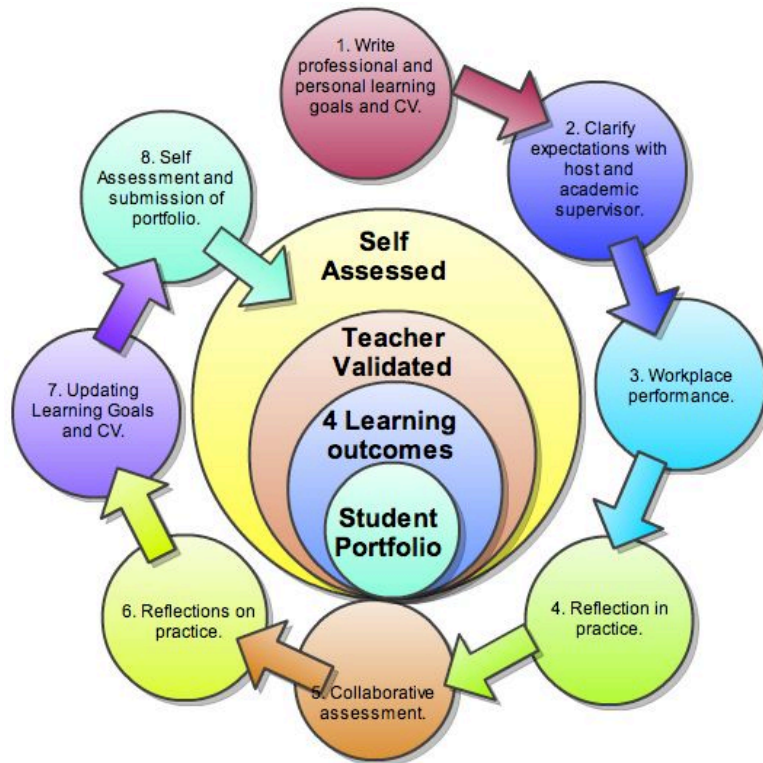
Authentic assessment aims to evaluate students' abilities in 'real-world' contexts. In other words, students learn how to apply their skills to authentic tasks and projects. Authentic assessment does not encourage rote learning and passive test-taking. Instead, it focuses on students' analytical skills; ability to integrate what they learn; creativity; ability to work collaboratively; and written and oral expression skills. It values the learning process as much as the finished product.

In authentic assessment, students:

- do science experiments
- conduct social-science research
- write stories and reports
- read and interpret literature
- solve math problems that have real-world applications

Portfolios for Learning and Assessment

Decreasing public high school elective programs



Metacognition is an awareness of one's own thought processes. As such, it involves an almost simultaneous, conscious degree of self-awareness. "This is how I approach or think about a situation"; "this is how I might best approach this particular concept in order to more fully understand it"; "this is how I am thinking about this issue and it is or is not effective"; "these are other possible approaches I might take instead" (Courts and McInerney, 1993 p.57)

Portfolios are personalized long term documentation of student mastery of course material. An essential element of portfolios are student reflections on their own learning and progression towards the mastery of the material documented in the portfolio. As such, portfolios are windows on the metacognitive process of students.

A long-term perspective accounts for student improvement and teaches students the value of self-assessment, editing, and revision. A student portfolio can include:

- journal entries and reflective writing
- peer reviews
- artwork, diagrams, charts, and graphs
- group reports
- student notes and outlines
- rough drafts and polished writing

Minority Majority

It's official: the U.S. is becoming a minority-majority nation



"We are a much more diverse country than we were," said Professor Andrew Cherlin, a sociologist at Johns Hopkins University in Baltimore. "Groups in America are mixing more than we think."

"Current rates of immigration are high and intermarriage is increasing," Cherlin added in a phone interview.

The "two or more races" population is projected to be the fastest-growing group over the next 46 years, with its population expected to triple in size. The Census breaks down the "two or more races" category as white combining with any other race, i.e. American Indian, Alaska native, Asian and black.

Source: US News and World Report

According to the U.S. Census Bureau, in 2014 there were more than 20 million children under 5 years old living in the U.S., and 50.2 percent of them were minorities.

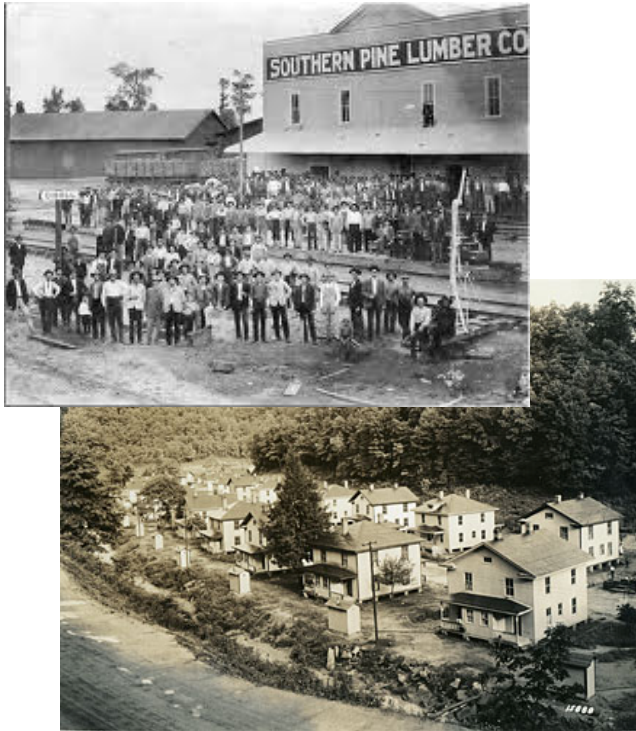
Parents who identified their child as white with Hispanic origin were the largest minority, making up 22 percent of the 19.9 million children under age 5, followed by African American children, who make up 15 percent.

The minority population is expected to rise to 56 percent of the total population in 2060, compared with 38 percent last year. When that happens, "no group will have a majority share of the total and the United States will become a 'plurality' [nation] of racial and ethnic groups," the U.S. Census states. The minority-majority trend reflected among 5-year-olds is the beginning of that shift.

A record 14.6 percent of all new marriages in the U.S. in 2008 were between people of two different races or ethnicities, according to a social and demographics trends report by the Pew Research Center, and the children of these couples reflect America's changing demographics. Multiracial children of black-and-white descent were the largest group in 2014, according to Census data, making up 36 percent of the multiracial population under 18.

Company Towns

Employer owned towns provide all infrastructure and services



In some situations, company towns developed out of a paternalistic effort to create a utopian worker's village. Churches, schools, libraries, and other amenities were constructed in order to encourage healthy communities and productive workers. Saloons or other places or services believed to be negative influences were prohibited.

Source: Wikipedia

A company town is a place where practically all stores and housing are owned by the one company that is the only employer. The company provides infrastructure (housing, stores, transportation, sewage and water) to enable workers to move there and live. Typically, such towns are founded in a remote location, so that residents cannot easily commute or shop elsewhere. Company towns are often planned with a suite of amenities such as stores, churches, schools, markets and recreation facilities. In fast-growing remote areas companies planned housing to support the business' needs, and then hired workers to build an infrastructure and more workers to staff the business needs.

In the present-day United States, it is relatively rare for any place in which a single company owns all the property to be granted status as an incorporated municipality. Rather, companies will normally prefer their wholly owned communities to remain unincorporated, as this permits administration of the community to be carried out by appointed company officers rather than elected officials. However, there are incorporated municipalities that are heavily dependent upon a single industry or organization and may be loosely considered a "company town", even though the company does not technically own the town.

The Cell Phone Wins Again

The computer of choice for most people on earth is the cell phone



80 percent of mobile data traffic will be from smartphones by the end of 2020. While we hear a lot about how people are now using their smartphones as their primary computing devices, the fact is that we are in the midst of a veritable explosion of mobile data usage. Ericsson says it will grow tenfold in the next five years, with Asia Pacific alone accounting for 45 percent of that.

In today's Always On, Real Time, Anywhere world, people are voting with the pocket and choosing a smart cell phone as their computer of choice. The cell phone has evolved very quickly and now with a smartphone, you can connect to the Web from virtually anywhere. You can look up information, send emails, take pictures, navigate highways, and play music--often simultaneously.

Today there are 2.6 billion smartphone subscriptions globally, and while growth has been levelling off in developed markets like the U.S. and Europe, it's not stalling altogether by a long shot. By 2020, globally there will be 6.1 billion smartphone users led by huge growth in less mature markets. And with 6.1 billion smartphones in circulation, we will see a tipping point of sorts: smartphones will finally overtake the number of active fixed line subscriptions worldwide in 2020.

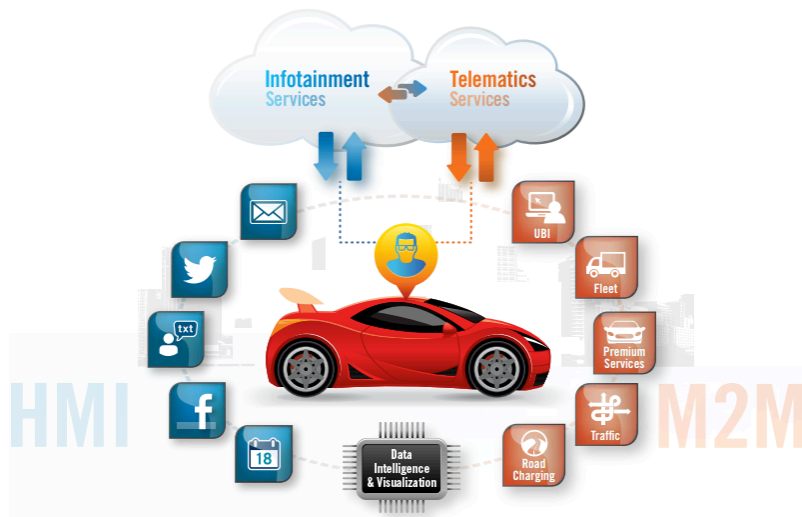
Those 6.1 billion smartphone users works out to some 70 percent of the world's population using smartphones in five years' time, a measure of just how central these devices are becoming to how we communicate with each other and do much more.

Source: TechCrunch

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The Connected Car

The computer of choice for most people on earth is the cell phone



By 2020, BI Intelligence estimates that 75% of cars shipped globally will be built with the necessary hardware to connect to the internet.

The connected-car market is growing at a five-year compound annual growth rate of 45% – 10 times as fast as the overall car market. We expect that 75% of the estimated 92 million cars shipped globally in 2020 will be built with internet-connection hardware.

Source: Business Insider

Connected Car (definition) - the presence of devices in an automobile that connect the devices to other devices within the car/vehicles and or devices, networks and services outside the car including other cars, home, office or infrastructure.

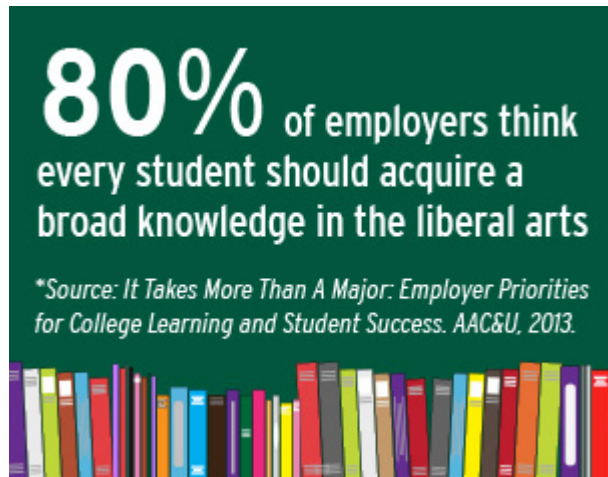
As Ford Motor tries to evolve into a car company for the 21st century, it's using data generated by its connected vehicles to hone product design, improve driver experience, and even discover new businesses.

Makers of connected cars must radically rethink vehicle design and build if they are to counteract emerging automotive cyber-security threats, an industry expert has warned.

Connected-car vehicle prices are out of reach for most car buyers, but they will drop significantly in the next few years. The high average selling price of \$55,000 is driven by the fact that connected-car shipments tilt toward the luxury category.

The STEM Gap vs a Liberal Arts Degree

Can you get a job of the future with a liberal arts degree?



"There is rightly a huge focus on turning out STEM graduates," says Michelle Tullier, Georgia Tech's executive director of Career Development, "but there's also a lot of awareness of the importance of the skills and knowledge that comes with a liberal arts degree. Those two things do not have to be in conflict."

As the pace of all this innovation picks up, the next generation of workers will need to keep exploring, adapting, and broadening their experiences—something a liberal arts degree has always offered great training in.

"Students have to be their own advocates in a bigger way now," Mary Raymond, of Pomona College, says, and then adds, "Remember you're a work in progress."

Source: Fast Company

There's now a chasm separating what high-tech industries need in order to stay competitive and the skills current students can offer once they're old enough to work for them. It's called the STEM gap. And not only is it widening, it's opening fissures in non-STEM fields as well, as technology transforms industries that didn't used to need data scientists or programmers but now do.

What is the payoff for getting a degree? At their heart is the question of what payoff looks like. Is it landing a high-salaried job after graduating, or becoming an informed, critical-thinking member of society? Should the focus be on filling the STEM gap or on education for its own sake?

"The liberal arts connect with a person's authentic self," says Mary Raymond, associate dean of students and director of Career Development at Pomona College. In that view, a liberal arts education is as valuable as it's ever been, for much the same reasons its advocates have put forward for decades.

"When it's your interests [that are] guiding you, then you're building...your own little 'business' of what motivates you," Raymond explains, "as opposed to something someone says is a good idea and is going to give you security. Because we know there's no security."

The War for Talent

Bosses bribe workers to take vacation in healing U.S. job market

Help Wanted

Fewer jobless vying for each available position reveal a labor market tilting in the worker's favor



Source: U.S. Bureau of Labor Statistics data compiled by Bloomberg

Bloomberg

“When you give somebody a wage increase, the expectation is that’s there forever, and the next year you have to build on that, whereas with paid vacation, it’s not as obvious that it goes into the base,” said the former Labor Department chief economist.

Source: Bloomberg

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Even with the threat of jobs being lost to automation and robotics highly coveted jobs are becoming either scarce or employers are participating in a war to keep their best and brightest with unique benefits.

More businesses are lumping together all types of paid time off -- sick, personal and vacation days -- in an effort to provide more flexibility.

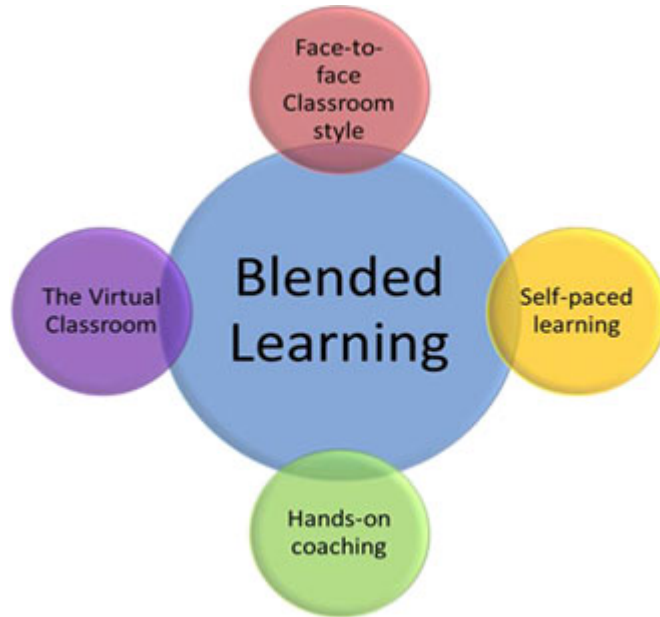
In Silicon Valley, where technology companies feel the strains of an especially tight job market, employers are enticing workers with buzz phrases like “unlimited vacation” and “paid-paid vacation.” As the jobless rate drops further through the Federal Reserve’s defined range of full employment, hiring managers across industries should feel the pressure to pony up.

Grant Thornton LLP, the sixth-largest U.S. accounting firm, said Wednesday it will offer U.S. employees unlimited time off.

While almost all U.S. companies offer some form of paid time off or vacation, only about 2 percent provide unlimited paid time off and fewer than 1 percent have unlimited paid vacation plans, according to an annual benefits survey released in June by SHRM. Almost none said they planned to institute these types of “unlimited” policies in the next year.

Giving High School Students More Choice in Scheduling

Want high schoolers to succeed? Stop giving them fifth-grade schedules.



As with any model, ScholarShift is not perfect. We are continually refining it. Students have to adapt and become comfortable with the discomfort of responsibility. The school has to provide structure in the form of ongoing adult mentorship and guidance to assure all runs smoothly. However, paradoxically, it is this structure that liberates the students, while simultaneously guiding them into adulthood and educational ownership.

Nick Stoneman is president of Shattuck-St. Mary's, a Minnesota school committed to using blended classes to transform students' educational experiences as well as developing campuses around the world.

High school students ought to manage their own time. But in the typical one-size-fits-all daily schedule known widely as “cells and bells,” students migrate from class to class every 48 minutes. Borne of necessity, cells and bells homogenize education. Complacency is a risk when students have their time managed for them, as are both absenteeism and a lack of engagement.

Having seniors in high school face the same type of schedule each day as that which defines a fifth grader's day does not make developmental sense, nor offer the kind of preparation teens need for postsecondary education.

- Schools must make a fundamental shift in the programming provided for students.
- Teachers must make a fundamental shift in their approach.
- Students must make a shift from being passive receptacles of information to being active participants and owners of their own education.

Here is a model: a student has a traditional daily schedule on Tuesdays and Thursdays. On Mondays, Wednesdays and Fridays, the student obtains all the content and assignments through a Web page. The teacher is in the classroom on Mondays, Wednesdays and Fridays for extra help. These are “blended courses”.

Source: The Hechinger Report

Micro-credentials

Paying partial attention continuously as a way of being / staying connected



*"Micro-credentials should be able to travel between contexts."
KAREN CATOR, CEO OF DIGITAL PROMISE*

Carla Casilli, Director of Design and Practice at Badge Alliance, shared that localized systems of badging were valuable and meaningful to the communities they operated in, citing Bernard Bull's Concordia University badging practices as an example. "An overarching standard would be successful, but a better badging system would be diverse" amongst varying communities, Casilli said. "There are so many different forms of success when that happens."

Source: edSurge

Catalyst | Concept Cards

Badges, certifications, skill identifiers--you've probably seen micro-credentials in one digital form or another. But how do we know whether they actually matter in the real world?

A problematic assumption about professional development is that a person must sit in a class for X days a week, Y hours per day to develop a skill. According to Srinivasan, this "seat time" requirement hinders the development and adoption of micro-credentials.

In the real world, learning can happen anytime, anywhere. And it often takes place outside the confines of a classroom, and at the learner's own initiative.

Digital badges are more nimble than their cousins: diplomas and degrees. They allow sharing of evidence of skills and knowledge acquired through a much wider range of life activity, at a more granular level, and at a pace that keeps up with individuals who are always learning—even outside the classroom.

Randy Depew of KQED shared his experiences in generating media literacy badges, saying, "people will work towards their strength," and that "it has always been about competency, not learning." John Foster, CEO of NOCTI (the National Occupational Competency Testing Institute) wondered whether micro-credentialing should be more than that. "How do you make sure that micro-credentials aren't disconnected from the learning?" he asked.

Employee Benefits of the Future

Using preventative incentives for employees to lower medical costs



For every dollar large employers spent on wellness programs, they saw company medical costs fall about \$3.27. Also, the study found a comparable payoff in productivity: For every dollar spent on wellness programs, the companies' absenteeism-related costs fell about \$2.73

Source: FutureofWork.com

Research shows, companies are becoming more concerned with employee wellbeing. Studies show US employers offering a general wellness program has risen from 58% in 2008 to 70% this year. Researchers say this is somewhat due to an increasing healthcare cost.

Preventative incentives offered to employees for activities such as fitness challenges and wearables that track activity. The gamification of this strategy has been found to motivate more participation. The report found that activity trackers had already gained 13% employer participation, and fitness challenges had achieved 34%.

Additional perk benefits employers are offering include:

- Paid surgical leave
- Electric vehicle charging
- Student loan repayments

<https://hbr.org/2014/02/in-defense-of-corporate-wellness-programs/>
<http://www.futureofwork.com/article/details/the-future-of-work-happy-employees-happy-customers>

Corporate Powered Civil Change

2015 will be the year for progressive brands to initiate, undertake or support meaningful civic transformation.

When the winds of change
blow, some people
build walls and
others build windmills.
-Chinese proverb

In May 2014, Volvo partnered with the Swedish Transport Authority on the EletriCity project to create roads that can charge electric vehicles. Features will include inductive charging that can wirelessly transmit power to the city of Gothenburg's electric bus fleet.

October 2014 saw traffic data platform Waze announce Connected Citizens: a partnership program exchanging data with governments across the world with the aim of improving urban traffic conditions. The program launch partners included cities such as Los Angeles, Rio de Janeiro, Barcelona and Tel Aviv.

Source: Trendwatching

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Across the globe, consumers know that public authorities are struggling to address many pressing social and economic issues in the face of constrained funding and/or ineffective legacy systems.

In fact, 73% of Millennials don't believe governments can solve today's issues alone, and 83% want businesses to get more involved (MSLGROUP, September 2014).

That's why in 2015, forward-thinking brands will step up to the challenge of real, meaningful change in the civic arena. And not just with 'standard' CSR initiatives, but by identifying governmental shortcomings and – either through partnerships or by working directly with the community – effecting real and lasting positive change.

One caveat. If it's just your marketing department driving a **BRANDED GOVERNMENT** initiative, then may we humbly suggest you re-examine your commitment to your chosen cause. If it feels and looks like a PR stunt, that's probably because it is ;)

Accelerating urbanization

The rapid urbanization seen in recent decades is just the start of a steepening growth curve...



Source: PwC's Global Annual Review 2013

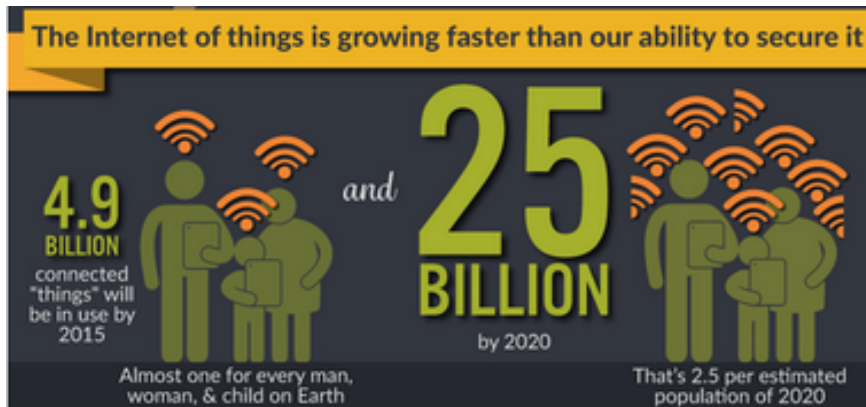
The rapid urbanization seen in recent decades is just the start of a steepening growth curve. By 2030, the proportion of people living in cities will have surged to 60%.

Within this overall growth, the pace of urbanization will vary widely across the world. Between now and 2030, demographers expect the urban population to grow fastest in those regions where overall population growth is highest and the proportion of city dwellers is currently relatively low. This means sub-Saharan Africa and Asia – two regions at differing stages of the journey to economic development.

We will see many knock-on effects from advancing urbanization over the coming decade. Expanding city populations – especially in emerging economies – will demand rising investment in urban infrastructure, putting further strains on vital resources. Urban centers' growing size and economic power will see a resurgence of the 'city state'. And in some cases, there may need to be a re-think about the provision of public funding to deal with issues arising out of rapid urbanization.

Internet of Connected Things

By the end of 2015, almost 5 billion 'things' will be connected to the Internet



"The number of connected intelligent devices will continue to grow exponentially, giving 'smart things' the ability to sense, interpret, communicate and negotiate, and effectively have a digital 'voice'," said Steve Prentice, vice president and Gartner Fellow, on whose data the infographic was built.

By the end of 2015, 4.9 billion connected items will be in use - that's almost one for each person on the earth. Within just five years, that number will have risen to a whopping 25 billion.

The Internet of Things is growing. Today, all sorts of devices, whether industrial, commercial or domestic, are embedded with sensors and communicating. Coffee makers, refrigerators, televisions, thermostats, security systems and even cars are all part of the Internet of Things. Even cows have been fitted with wi-fi sensors to keep owners informed of whether they are sick or pregnant.

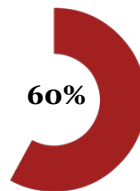
Demographic shifts

Demographic shifts will be a – if not the – major force for social and economic change...



60% of CEOs said demographic shifts were one of the top 3 global trends they believe will transform business the most over the next five years?”

Base: All respondents (1,344)
Source: PwC 17th Annual Global CEO Survey



In combination with the migration of global spending power to emerging economies, the coming decade will also see explosive population growth in some countries and declines in others. These diverging trends will have far-reaching impacts, ranging from growing pressure on the supply of critical resources to sweeping changes in people’s goals and aspirations at a personal and social level.

At the heart of these effects is the ageing of the global population. Across the world, rising life expectancy is set to drive an ongoing increase in the proportion of over-60s. However, within this overall trend, some societies are ageing rapidly – meaning their supply of working-age people will decline as a proportion of the total population. In contrast, other countries have populations that are young and growing, promising ever-larger labor forces and consumer markets.

The social and economic implications of such differences are profound.

Source: PwC’s Global Annual Review 2013

Emerging Minority Majority Society

According to the U.S. Census, in 2011, the majority of babies born in America were minorities ...



There's no question that the composition of the U.S. population is constantly shifting. Stepping back and looking at major national demographic trends – including age, race, marital status, gender, incomes, education and more – reveal opportunities for innovation and growth.

Demographics can help paint a picture of shifting social influences – changes in the attitudes, values, and lifestyles not only within growing customer segments, but of our society as a whole. As some populations grow, others shrink as a percentage of the marketplace and the growing segments gain more influence.

According to the U.S. Census, in 2011, for the first time, the majority of babies born in America were minorities (Hispanic, African American, Asian, or mixed race). Non-Hispanic Whites are the minority in four states and 22 of the 100 largest U.S. metro areas. Asian Americans are the fastest-growing ethnic population, projected to grow by 137% over the next 40 years. Increases are due in part to birthrates – while fewer Non-Hispanic Whites are having children, Hispanic and Asian Americans are, well above the replacement rate.

Apprentice Economy Version 2.0

Is there a new apprentice economy emerging?



In our Apprentice Economy 2.0, it isn't about having 15 internships by the time you graduate – especially when you count week-long temp positions as an “internship”. Much more important to recruiters is the quality of the internships, your direct contributions – and how much you learned from the experience. Even in a bad internship, the latter is incredibly important; sometimes we get a PhD in what not to do. When properly articulated, the lessons learned are highly valued by potential employers.

Source: youtern.com

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Back in the old days of labor unions and skilled craftsmanship, there was a clear ascension to the ranks of the employable: emerging talent would serve as an apprentice, thoroughly developing a specific trade or skill.


Here we go again. Welcome to Apprentice Economy Version 2.0.

Many blogs and major articles have pointed out that a college degree no longer equates to a job offer. As the economy settles into new realities, employers are expecting more of candidates with a fresh education and little experience.

College students are already responding by adding internships as a compulsory component of their college experience. According to NACE (National Association of Colleges and Employers), over the past decade or two the college students that have completed an internship have increased from 10% to over 70%. Taking this trend a step further, many students have increased the number of internships they complete, believing that to be competitive the norm has become at least three career-relevant internships during their college career.

Advanced Robotics

Increasingly capable robots with enhanced senses, dexterity, and intelligence used to automate tasks or augment humans.



#5 Advanced robotics
Increasingly capable robots with enhanced sensors, dexterity, and intelligence; used to automate many tasks

Potential economic impact in 2025 across sized applications of **\$1.7 trillion–\$4.5 trillion**

Offers potential to **improve the lives** of 50 million amputees and those with impaired mobility

Component technologies	Key applications
<ul style="list-style-type: none">Artificial intelligence/computer visionAdvanced robotic dexterity, sensorsDistributed roboticsRobotic exoskeletons	<ul style="list-style-type: none">Industrial/manufacturing roboticsService robots—eg, food preparation, cleaning, and maintenanceRobotic surgeryHuman augmentationPersonal and home robots—eg, for cleaning, lawn care

Advanced robotics, for example, has the potential to affect \$6.3 trillion in labor costs globally. Technologies like next-generation genomics and advanced robotics could deliver major health benefits, not all of which may be usable by health-care payers and providers, many of whom face growing pressure to help improve patient outcomes while also reducing health-care costs.

For the past several decades, industrial robots have taken on physically difficult, dangerous, or dirty jobs, such as welding and spray painting. These robots have been expensive, bulky, and inflexible—bolted to the floor and fenced off to protect workers. Now, more advanced robots are gaining enhanced senses, dexterity, and intelligence, thanks to accelerating advancements in machine vision, artificial intelligence, machine-to-machine communication, sensors, and actuators. These robots can be easier for workers to program and interact with. They can be more compact and adaptable, making it possible to deploy them safely alongside workers. These advances could make it practical to substitute robots for human labor in more manufacturing tasks, as well as in a growing number of service jobs, such as cleaning and maintenance. This technology could also enable new types of surgical robots, robotic prosthetics, and “exoskeleton” braces that can help people with limited mobility to function more normally, helping to improve and extend lives.

\$6 trillion – Manufacturing worker employment costs, 19% of global employment costs

\$2–3 trillion – Cost of major surgeries

320 million – Manufacturing workers, 12% of global workforce

Source: McKinsey Global Institute

Workforce as a Service

Using a workforce-as-a-service model lets you add a skilled, vetted and insured workforce when you need it and release it when you don't.



“We analyze in great depth the client, their technology and their support requirements, so what we provide isn't just the hardware, but the maintenance personnel, too. This is great for companies who don't want to hire or train new employees, but who need to fill a need without having such a huge upfront investment.”

— Peter Cannone, CEO of OnForce

Source: CIO.com 9/30/13

What if you could scale your IT personnel requirements as you would computing resources?

One of the major benefits of a services-delivery model such as software-as-a-service (SaaS) or the Cloud is the capability to quickly scale computing resources - networking, storage, bandwidth, for instance - on an as-needed basis. IT simply adds more resources when they're needed and removes them when they aren't. What if you could do the same with personnel resources; that is, add teams of skilled tech pros on-demand and release them once a project is completed?

One service provider has nearly 1,000 independent contractors signing up with the company each month. Applicants go through a rigorous screening process that includes a personal and skills questionnaire, an online battery of tests, a phone screening, a background check, drug testing, all to guarantee that customers are receiving 'W-2 quality' workers.