

Environmental Scan Report

March 2012

Institutional Research



Environmental Scanning is a necessary tool for planning the long-term strategic direction of Moraine Park Technical College. This process can help proactively define the opportunities, potential threats, or areas of change that will impact the college from internal and external environmental factors. This trend information can help the college overall, as well as individual teams, develop and implement goals and strategies.



TABLE OF CONTENTS

POPULATION/DEMOGRAPHICS/SOCIETAL TRENDS	3
MPTC DISTRICT/COMPETITION/MARKETPLACE.....	4
ECONOMIC/BUSINESS/WORKPLACE TRENDS	6
EDUCATION TRENDS.....	17
FOOD AND AGRICULTURE INDUSTRY TRENDS	33
THE NEW MEGATREND: SUSTAINABILITY	33
TECHNOLOGY TRENDS	34

FACTS, TRENDS, AND FORECASTS

Key assumptions for the 2012-2013 fiscal year quantify the emerging trends identified through environmental scanning. Specific trends are established based upon the most current available information and help to build the strategic plan necessary to carry out the mission of the college.

POPULATION/DEMOGRAPHICS/SOCIETAL TRENDS

◆ **Wellness takes the stage**

Good health is becoming more of a status symbol than ever before. Those who continue to be sloths (even great performers) will lose “value” internally at corporations, while healthy looking individuals who appear to have greater stamina will move ahead more quickly. Organizations that market health or wellness products that can fix ailments or prevent misery will grow faster as consumers seek to be seen as healthy and wise. Outdoor activity will become more “status-y.” (*Tech Republic, Five Mega-trends that will affect you in 2011. John McKee, January 6, 2011*)

◆ **Weighty problem**

However, new research shows that the US workplace itself plays a huge role in workers' collective weight problem. Back in 1960, one of two Americans worked in jobs that required them to be physically active. Now, only one in five US workers expend a high level of energy at work, researchers have found. Thirty-four percent of Americans over age 20 are obese, according to the US Centers for Disease Control and Prevention. Another 34 percent are overweight, but not obese.

While the shift from labor-intensive jobs in agriculture and manufacturing to less physical information and service occupations is widely recognized. Calculating calorie expenditures of various occupations from 1960 to 2008, the researchers found that men now expend 140 fewer calories each day and women expend 124 fewer calories. "We were kind of stunned how changes in workplace related to physical activity so closely match increases in body weight of the average American," he says. (*HR Magazine, Page 32, October, 2011.*)

◆ **Aging Workforce poses a problem, wmc report says**

The 2011 Growing Wisconsin report compares state performance across a number economic and policy areas. Wisconsin had a 65% higher manufacturing job concentration than a typical state economy in 2011. That percentage has increased to 88% in 2011, according to the report.

"Wisconsin's population distribution by age is beginning to look top-heavy, with high levels of residents above age 75." With higher than average numbers of residents in their 50s." The report also says efforts must be increased to attract younger people into the state. (*Journal Interactive of the Journal Sentinel, October 17, 2011.*)

◆ **Generation jobless: young men suffer worst as economy staggers**

The unemployment rate for males between 25 and 34 years old with high-school diploma is 14.4 percent - up from 6.1 percent before the downturn four years ago and far above today's 9 percent national rate. The picture is even more bleak for slightly younger men: 22.4 percent for high-school graduates 20 to 24 years old. That's up from 10.4 percent four years ago.

The share of men age 25-34 living with their parents jumped to 18.6 percent this year, up from 14.2 percent four years ago and the highest level since at least 1960, according to the Census Bureau. *(The Wall Street Journal, November 7, 2011.)*

◆ **Economic downturn means fewer babies**

The downturn in the economy has had people delaying doctor visits for years and is now also slowing pregnancy. After steadily increasing for decades, there has been a decrease in the number of babies born at Milwaukee-area hospitals over the past three years. Newborn deliveries first plunged in 2009, and continued to decline in 2010 and 2011, according to HCTrends, a Milwaukee health care data tracking firm. *(The Business Journal, Page A3, March 2, 2012.)*

MPTC DISTRICT/COMPETITION/MARKETPLACE

Academic Programs offered at other WTCS districts that had the highest enrollments by Moraine Park residents are listed below for fiscal year 2010-2011 with FTE 10 or greater.

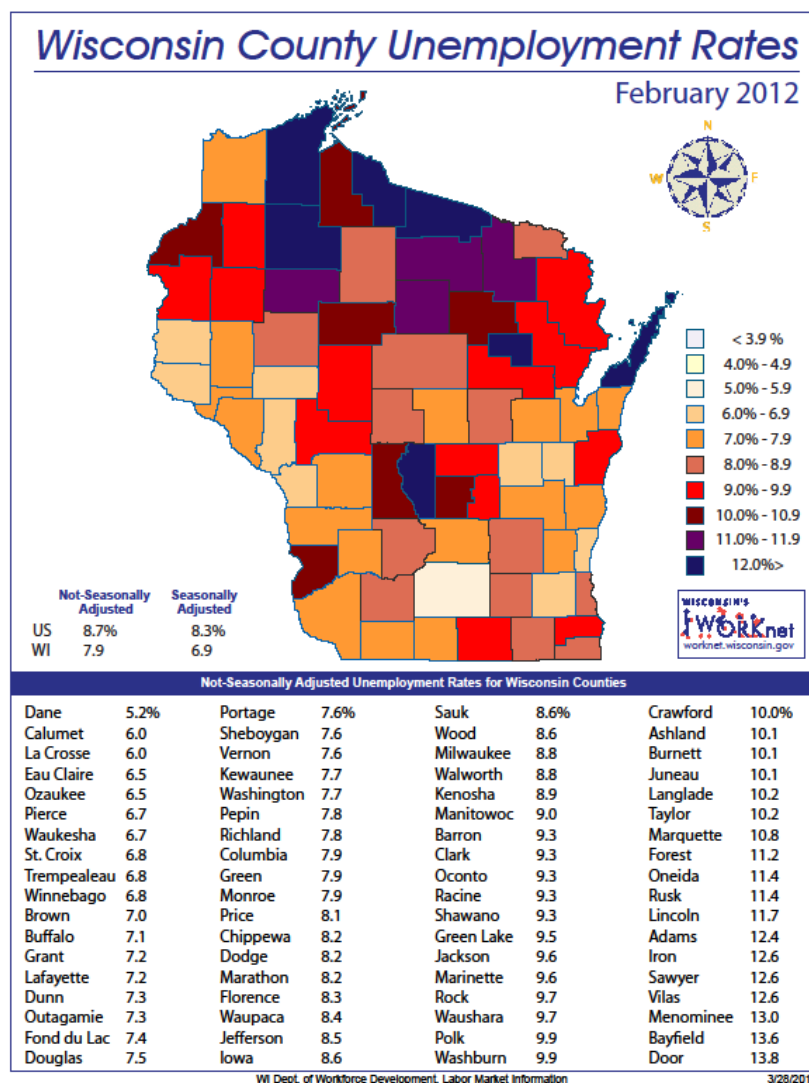
<u>Program Number</u>	<u>Program Name</u>	<u>Headcount</u>	<u>FTE</u>
10-504-1	Criminal Justice - Law Enforcement	191	124.30
10-102-3	Business Management	86	45.93
10-503-2	Fire Protection Technician	60	36.06
20-800-2	Liberal Arts – Associate of Sciences	74	35.90
10-543-1	Nursing – Associate Degree	65	28.77
20-800-1	Liberal Arts – Associate of Arts	64	28.60
10-150-2	IT-Network Specialist	35	24.90
10-104-3	Marketing	40	22.80
10-106-6	Administrative Professional	27	18.86
10-101-1	Accounting	32	18.53
10-508-1	Dental Hygienist	46	17.40
10-304-1	Interior Design	30	16.70
10-520-3	Human Services Associate	28	15.80
10-201-1	Graphic Design	26	15.30
10-110-1	Paralegal	26	13.97
10-307-1	Early Childhood Education	25	13.53
10-602-3	Automotive Technology	15	13.37
10-057-1	Natural Resources Technician	16	12.90
10-152-1	IT-Programmer/Analyst	25	12.27
30-504-1	Criminal Justice – Law Enforcement	37	11.80
10-412-1	Diesel Equipment Technology	17	11.60
31-412-1	Diesel Equipment Mechanic	11	11.23
10-196-1	Supervisory Management	18	11.17
31-509-1	Medical Assistant	23	10.37
10-154-3	IT-Computer Support Specialist	18	10.27

(Wisconsin Technical College System Client Reporting, VE215585A, October 11, 2011)

◆ **Local area unemployment statistics**

The unemployment rates are not seasonally adjusted

County	Year	Labor Force	Unemployment Rate
Dodge	2010	46,134	8.9%
Dodge	2011	46,471	7.8%
Fond du Lac	2010	55,523	8.2%
Fond du Lac	2011	55,301	7.2%
Green Lake	2010	9,807	9.3%
Green Lake	2011	10,040	8.1%
Washington	2010	73,465	8.0%
Washington	2011	74,331	6.9%



(Wisconsin Department of Workforce Development, Bureau of Workforce Training – Labor Market Information, April 19, 2012)

ECONOMIC/BUSINESS/WORKPLACE TRENDS

◆ **Employers complain, but don't train**

Employers complain they can't find skilled workers, but they're demanding too much and refusing to train new workers, Peter Cappelli, a management professor at the University of Pennsylvania's Wharton School and director of Wharton's Center for Human Resources.

To get America's job engine revving again, companies need to stop pinning so much of the blame on our nation's education system. They need to drop the idea of finding perfect candidates and look for people who could do the job with a bit of training and practice.

The Help that's Most Wanted - Hardest jobs for US Employers to Fill in 2011:

1. Skilled trades
2. Sales representatives
3. Engineers
4. Drivers
5. Accounting & finance staff
6. IT staff
7. Management/executives
8. Teachers
9. Secretaries/administrative assistants
10. Machinists/machine operators

(Community College Spotlight, November 1, 2011.)

◆ **McKinsey: US job market won't rebound for years**

When will the US economy return to full employment? No sooner than 2018, according to a new report from McKinsey - oh, and that's the best-case scenario. Worst case, the company produces a measly 9-10 million jobs over the rest of the decade, far short of the 21 million jobs the consulting firm estimates we need to bring unemployment down to around 5 percent by 2020. *(BNET.com, June 17, 2011.)*

◆ **Manufacturers search for skilled workers**

Overall economic conditions are far from robust, but jobs abound at some Milwaukee-area companies. But even with a significant number of people out of work, employers continue to be faced with challenges in filling open positions, which has forced them to get aggressive in their efforts to find workers. The town of Genesee-based company announced in November plans to hire as many as 400 employees. To this point, about 150 have been hired, chief executive officer Aaron Jagdfeld said.

Finding candidates for entry-level factory positions has been easier than filling high-skill jobs on the plant floor and white collar jobs, particularly in engineering, Jagdfeld said. Super Steel LLC has reported to a radio advertisements, among other tactics, to attract employees. The Milwaukee contract manufacturer serves a variety of industries, including rail, construction, agriculture, military and general industrial.

The company is seeking to fill open jobs for assemblers, welders and other skilled manufacturing positions. Jobs are being added as a result of continued growth in business with existing and new

customers, said Dirk Smith, Super Steel's president and chief operating officer. Super Steel, too, has struggled to fill some open manufacturing positions, particularly those requiring higher skill levels.

As a result, it has entered into a partnership with a local temporary agency and Milwaukee Area Technical College to train candidates who "are close" to possessing the necessary skills needed for the jobs, Smith said. Super Steel also is using online job boards to attract candidates, as well as advertisements in small, local newspapers within a 40-mile radius, Smith said. (*The Business Journal*, December 16, 2011.)

◆ **The aging workforce**

An April Gallup survey has similar findings: 534 working people were asked whether, when they reach retirement age, "you think you will continue working and work full-time; continue working and work part-time; or stop working altogether?" Those who answered that they would continue to work were then asked, "Would you do it because you want to, or because you will have to?"

- 18% said they would work full-time, and a third of those said it was because they wanted to, not because they would have to.
- 63% said they would work part-time; almost two-thirds of those said they would do it because they wanted to.
- 18% said they would retire and stop working altogether.

(*USA Today*, Cover Page, January 24, 2012.)

◆ **Job creation is ceasing to provide employment for all who need it**

According to official estimates, it takes 100,000 jobs per month to absorb young people and others just entering the labor force. Between January 1999 and October 2009, the U.S. economy generated an average of only 26,000 jobs per month. Most economists believe it will take five years—that is, to 2015—just to replace the 8.4 million jobs lost to date in the post-2007 recession.

The economic turmoil of recent years is only partly responsible for this trend. It has been accelerated by the continuing replacement of human labor by computers and automation. In the United States, worker productivity rose by 6.9% (annualized) in the second quarter of 2009, 9.5% in the third, and 6.4% in the fourth. For more than a decade, most productivity gains have come in industries that have been reworking business processes to incorporate computers and automation.

The other side of growing productivity is a declining need for human workers. If you raise productivity by 2.5%, you need 2.5% fewer workers to deliver the same amount of goods or services. Employment growth slows. And when productivity grows faster than the market, employment declines.

Implication: One of the most important functions of a society is to distribute wealth so that the majority of people have at least the opportunity to provide a secure life for themselves and their families. The jobs-for-wages model adopted during the Industrial Revolution is losing the ability to fulfill this mission. (*The Futurist*. Volume: 44. Issue: 3. Publication Date: May-June, 2010.)

◆ **Skill gap still plagues manufacturers**

Industrial firms throughout southeastern Wisconsin continues-to-face a major dilemma in finding skilled workers to fill open factory jobs.

The challenge has long frustrated manufacturers, especially in light of sustained high levels of unemployment brought on by the extended economic downturn.

Many companies have launched internal training programs to address worker shortages. At the same time, local political leaders have pledged to take action with initiatives they claim will better match training with the work force needs of local employers.

The problem with our schools is that they don't know if they are running an educational facility or a social program. Meeusen said. I always thought that the purpose of schools was to give the kids an education so that they could someday create a good life for themselves and add to our economy.

Creating appropriate training and educational programs is crucial in addressing the pronounced skills mismatch, said Brinkman, who leads the Madison-based organization that works with small and midsize manufacturers to make them more competitive and efficient. (*The Business Journal, Page A11, March 2, 2012.*)

◆ **Private sector employers add more jobs in 2010-2011, revised BLS data reveal**

Private sector employers added 140,000 more jobs than previously reported over the 12 months ended in March, according to preliminary figures accounted Sept. 29 by Department of Labor's Bureau of Labor Statistics.

In addition, the government shed 52,000 fewer jobs during the same period, BLS said in announcing its preliminary estimate of the upcoming annual benchmark revision to employment data.

If confirmed, the net increase of 192,000 jobs would raise the total number of nonfarm payroll jobs added during the 12-month period to 1.5 million from 1.3 million, BNA's analysis shows.

By industry, job gains would improve in the whole-sale trade, retail trade, transportation, and utilities sector, (134,000) and in professional and business services (123,000), but would be revised downward in education and health services (120,000) and miscellaneous services (107,000.) (*BNA-Human Resources Report, Volume 29, N, October 3, 2011.*)

◆ **Jobs are there, but workforce lacks skills**

There are good, family supporting jobs out there, but the state, our education system, and employers need to collectively focus on matching the availability of our workforce with those job needs. (*The Business News, Page 32, January 30, 2012.*)

◆ **Advanced manufacturing: help wanted**

About 80 percent of America's manufacturers are having trouble finding the right people with the right skills to work in their companies and on their factory.

In the 21st century, it takes more than just a high school diploma to work in many manufacturing fields. Companies are looking for well-trained workers to operate cutting-edge equipment, machines and tools.

Minnesota is leading the way with a pilot program announced last week called Right Skills Now. Right Skills Now will be a combination of a 16-week curriculum and an eight-week apprenticeship at a local manufacturer. (*Star Tribune, October 30, 2011.*)

◆ **Cost of health care coverage increased sharply in 2011, Kaiser survey finds**

The cost of family health insurance premiums rose 9 percent in 2011, according to findings from a Kaiser Family Foundation/Health Research and Educational Trust survey released Sept 27. Of the \$15,073 premium cost for family coverage in 2011, employees paid \$4,129, up 3.3 percent from \$3,997 in 2010, the survey found. Family coverage cost \$13,770 in 2010.

Benefits consulting firm Mercer said Sept 21 that the cost of employee health coverage is expected to rise 5.4 percent in 2012, which would be the lowest annual increases in 15 years (29 HRR 1021, 9/26/11). "We found an estimated 2.3 million young adults received coverage as a result of the [PPACA], which is at the height end of the original estimates of how many might be covered as a result of the law."

'The Quiet Revolution.' Altman's short-term outlook for employer-sponsored health care plans included an increased offering of high-deductible health plans and higher deductibles. The survey found that 31 percent of workers are enrolled in high-deductible health plans, with self-only coverage deductibles of at least \$1,000. Twenty-three percent of employers offering health plans have a high-deductible plan option, up from 15 percent of employers in 2010, the survey found.

- 60 percent of employers offered health insurance to employees in 2011, down from 2010's 69 percent, but more consistent with pre-2010 numbers.
- 26 percent of large companies offered retiree health coverage in 2011, the same percentage as in 2010.
- 56 percent of workers are still in grandfathered health plans.

(*BNA-Human Resources Report, Volume 29 N, October 3, 2011.*)

◆ **Executives to new grads: shape up!**

Note to recent college grads and the Class of 2012: You may not be as ready for the working world as you think you are. At least that is the opinion of about 500 senior managers and C-suite executives in a study by Global Strategy Group, on behalf of worldwide architectural firm Woods Bagot.

In all, a 65% majority of business leaders say young people applying for jobs at their companies right out of college are only "somewhat" prepared for success in business, with 40% of C-suite executives saying they are "not prepared at all". Not only that, but even those who get hired anyway may not rise very far. Almost half (47%) of C-suite executives believe that fewer than one-quarter (21%) of new grads have the skills they'll need to advance past entry-level jobs.

And what skills might those be? The most sought-after are problem-solving (49% ranked it No.1), collaboration (43%), and critical thinking (36%). Also, in demand is the ability to communicate clearly and persuasively in writing (31%). Technology and social media skills came in at rock bottom on the list, valued highly by only a tiny 5% minority of senior managers. The kicker: According to the poll, new grads fall far short of the mark in every one of these areas--except tech savvy, the least desired.

The executives surveyed overwhelmingly believe that academia has failed to keep up with the breakneck pace of change in the business world: More than three-quarters (77%) blame educators for new grad's lack of readiness. (*CNN Money, Page 1, February 1, 2012.*)

◆ **The global recovery is for real**

Although threats remain, and some regions will take longer to return to "normal," we're past the worst of it. Expect organizations to start acquiring and increase hiring (although that will be more part timers than in the past). The stock market, after two great growth years, will continue to pay off for smart investors.

(*Tech Republic, Five Mega-trends that will affect you in 2011. John McKee, January 6, 2011.*)

◆ **Most manufacturing executives report a shortage of qualified workers, survey shows**

A recent national survey from the Manufacturing Institute. Of the thousand manufacturing executives who completed the Manufacturing Institute's survey, nearly 70 percent reported that they have a moderate or severe shortage of available, highly-qualified workers. Over half expect the shortage to worsen within the next five years. Further, over 60 percent of executives stated that shortages and skill deficiencies are having a profound impact on their companies; ability to expand and improve.

Many executives reported that available jobs are in the areas of "skilled production," such as machinists, operators, distributors, and technicians. (*Manufacturing Institute Survey 2011.*)

◆ **Employers' expectations of employees are growing**

The percentage of employees who agree with each statement:

- 91% - Our company is asking employees to take on more responsibilities and to use a broader set of skills than in the past.
- 90% - Employees are expected to work harder to coordinate with other departments than in the past.
- 88% - The challenges employees face within our company are more complex today than they were in the past.
- 88% - To succeed in our company, employees need higher levels of learning and knowledge today than they did in the past.

Source: "Raising the Bar: Employers' Views on College Learning in the Wake of the Economic Downturn" Hart Research Associates for Association of American colleges and Universities. (*universitybusiness.com, March, 2010.*)

◆ **Hard at work in the jobless future**

The Future of Work: Emerging Trends

Work will always be about finding what other people want and need, and then creating practical solutions to fulfill those desires.

The new trends for the workplace have significantly less built-in certainty. We will all need to rethink, redefine, and broaden our sources of economic security. To the extent that people are developing a broader range of skills, we will also become more resilient and capable of adapting to change.

Finally, we can expect that people will redefine what they truly need in a physical sense and find better ways of fulfilling their needs. This involves sharing and making smarter use of the assets we already have. Businesses are doing the same.

Co-Working:

There are now more alternatives to either working at home alone or being part of a much larger office.

Opting Out:

In a recent survey by Ogilvy and Mather, 76% of respondents reported that they would rather spend more time with their families than make more money. Similarly, the Associated Press has reported that less than half of all Americans say they are happy with their jobs.

A shift back toward one income households can happen when the costs of taxes, commuting, and child care consume a large portion of earnings. People who opt out are not considered unemployed, as they are no longer actively looking for paid work. Their focus often reflects a shift in values toward other activities, such as raising kids, volunteer work, or living simply.

The Future of Work, Personified:

The career path for younger generations are more closely resembles a patchwork quilt, as people attempt to stitch together multiple jobs into something that is flexible and works for them. In today's environment, they sometimes can't find a single job that is big enough to cover all of their expenses so they find themselves working multiple jobs simultaneously. The future of work is less secure and less stable than it was. (*The Futurist, Pages 32-35, March/April 2012.*)

◆ **Forecasters expect employment growth to continue at moderate pace over 2011**

Nonfarm payroll employment will grow at a moderate pace in the first half of 2011 before picking up slightly in the second half, but the nations' unemployment rate will remain elevated throughout the year, as the slow economic recovery that began in 2009 continues in earnest.

Employers in health care are suddenly facing hiring freezes, potentially putting a damper on one of the sectors that has continued to add jobs over the course of the recession. However, once more and more changes required by the recent health care overhaul are put into place, demand for health care services will grow again.

Much of the employment growth in recent months has been in temporary help positions, which he said was "not a good sign," since it indicates a reluctance on the part of employers to hire permanent workers. "Government employment is now likely to have a steady drip of small declines."

The construction industry will "turn positive" in terms of job growth in both the residential and nonresidential sectors. But some 1.5 million construction workers still "will either be idle, retired or working on other industries." Many construction workers "have been out of work so long that it will be hard for the industry to find skilled workers" in 2011, but by 2013, the industry may rebound such that there could be "worker shortages." (*BNA Report, January 17, 2011.*)

◆ **Welders, other skilled workers in high demand - employers expect shortages**

A hiring frenzy at Oshkosh Corp. and Marinette Marine Corp. could put a strain on companies seeking welders and other industrial employees. Hiring of 650 to 750 assemblers, welders, and other skilled-trades positions could begin as early as this month (Feb. 2011).

Oshkosh expects to build more than 23,100 trucks and trailers in the next two years and is gearing up to produce nearly 40 a day. The effort is expected to employ several thousand people.

Marinette Marine is hiring hundreds of people for a US Navy contract to build combat ships. Construction of the ships could result in several thousand jobs at the company and its suppliers in Wisconsin and Michigan.

The starting average hourly wage for a welder ranges from \$18 to \$19.50, according to NEW North Inc., a business development organization for northeast Wisconsin.

Two out five manufacturers in northeast Wisconsin plan to hire in 2011, based on a survey of 378 companies with at least \$3 million in annual revenue and 25 or more employees, according to the Northeastern Wisconsin Manufacturing Alliance. (*Journal Interactive (Journal Sentinel), February 7, 2011.*)

◆ **Generation jobless: for those under 24, a portrait in crisis**

Teens and adults under the age of 24, especially those with little or no college education, are faring the worst, economists say. The 16.7 percent unemployment rate among Americans in that group is more than twice the rate for workers 25 and older.

In the downturn of 1982 to 1983, unemployment among young adults topped 16 percent for 23 straight months. The current slump has been longer and deeper: The unemployment rate has been above 16 percent for 32 months -- and counting. For 29 of those months, the rate has been above 17 percent, reaching a record 19.5 percent in April of last year.

Unemployment is particularly acute for young men. In the 16 to 24 age group, 18 percent of males lacked jobs last month, compared with 15.3 percent of females.

Select Unemployment Figures from October 2011*
4.2% - With college degree, 25 and older
7.7% - With college degree, 24 and under
21.1% - High school graduate, without college degree, 16 -24
24.8% - Without high school diploma, 16-24
*not seasonally adjusted.
(*The Wall Street Journal, November 7, 2011.*)

◆ **A flight plan for the American economy**

We are producing the same amount of goods and services as in 2007 with 7 million fewer workers.

Two years into the recovery, growth is about two percent and job creation has reached around 250,000 a month, which might sound high but is actually barely enough to keep pace with all the new workers entering the job market for the first time.

The "new normal" of slower growth and job creation means lower tax revenues and more unemployment and health benefits to be paid out, hence a much larger deficit. Studies show that after a few years of not working, people lose the talents, skills, and work habits that make it possible for them to work productively.

Two powerful drivers have allowed for this new productivity. The first is technology, which is producing massive efficiencies across industries. It has already transformed manufacturing and is now beginning to transform white-collar professions, with computer programs able to do, for example, the basic discovery work performed by expensive lawyers.

The second force is, of course, globalization. There is now a single world market for many goods and services, and over the past 10 to 15 years, about 400 million people - from China, India, South Africa, Indonesia and elsewhere - have entered the global labor force, offering to make the same things Americans make for a tenth the price.

The image we all have in our heads when we think of bringing back good jobs is manufacturing. Focus on technical education, technical institutes and polytechnics, as well as apprenticeship programs.

We need to create retraining programs for an entire generation of workers. It would have to be a program in which government paid a large share of the costs while educational institutions provided the services.

The Kauffman Foundation has found that from 1980 to 2005, nearly all net job creation in the US occurred in firms that were less than five years old.

The American Society of Civil Engineers gave US infrastructure a grade of D and estimated that we need to spend \$2.2 trillion to fix our airports, bridges, highways and trains systems. (*Time - In Partnership with CNN, May 23, 2011.*)

◆ **Top 10 dying industries**

The U.S. economy is recovering from a severe recession, but some industries are unlikely to ever fully bounce back.

Wired telecom carriers are among the industries seen on the decline.

A new analysis by research firm IBIS World looks at 10 industries that appear to be dying. The list isn't exactly shocking, but it represents a mix of sectors that are being left behind by technology or have been hurt by cheaper overseas competition.

The biggest industry profiled by IBISWorld is wired telecom carriers, largely being supplanted by cellphones and the Internet. The dominance of the Web and digital media also puts Newspaper publishers, record stores and video-rental companies on the list. Meanwhile, photofinishing also takes its place among the top 10 dying industries thanks to the growing influence of digital photography.

Cheap imports are blamed for a decline in mills and apparel manufacturers. Companies that rent formal wear are also counted among dying industries amid both competition from abroad and lower prices making owning your own formal wear a more attractive option than renting.

The only clear recession casualty that makes the list is manufactured home dealers. The housing boom led to a surge in the industry, but now years after the bubble burst the sector has continued to struggle.

1. Wired Telecommunications Carriers
2. Mills
3. Newspaper Publishing
4. Apparel Manufacturing
5. DVD, Game & Video Rental
6. Manufactured Home Dealers
7. Video Postproduction Services
8. Record Stores
9. Photofinishing
10. Formal Wear & Costume Rental

(Wall Street Journal, March 28, 2011.)

◆ **Scarcity of skills: manufacturing survey: 29 percent can't find qualified workers**

Nearly half of those polled in the Northeastern Wisconsin Manufacturing Alliance 2011 Manufacturing Vitality Index said they're making some kind of investments in capital expansion and modernization. About 41 percent of firms said they planned some kind of capital expansion within two years. And 48 percent planned a plant modernization with a median investment of \$225,000.

The center questioned 358 New North manufacturing employers (those with 25 or more employees and more than \$3 million in sales and had completed 183 surveys. The findings:

- Almost 38 percent of employers said they needed qualified operators and machine operators, machinists and skilled machinists, and qualified welders.
- More than 21 percent said they need qualified managers, buyers, purchasers, supervisors, and quality control technicians.
- The kind of skills that employers say are most desirable have little to do with technical know-how-they want people with so-called "soft" skills. That includes "personal attributes" such as intelligence, interpersonal and communications skills, strategic thinking and problem solving skills.

Most difficult positions to fill with qualified workers:

- Operators/machine operators, 15.8 percent
- Machinist/skilled machinists, 12.3 percent
- Welders, 10.5 percent
- Engineers, 9.9 percent

Most desired skills:

- 26.1 percent say the most desired skills - even more desirable than experience - were personal attributes, including intelligence, communication, interpersonal and problem-solving skills.

Least available skills:

- Experience, 30.2 percent
- Personal attributes such as communication skills, 23.2 percent
- Strong work attributes, including dependability and reliability, 19.5 percent

(*INSIGHT on Manufacturing, Pages 15-18, June, 2011.*)

◆ **Nursing tops list of high-paid jobs of the future**

10. Personal financial advisors:

Total new jobs (2008-2018): \$62,800

Median income: \$64,750

9. Dental hygienists

Total new jobs (2008-2018); \$62,900

Median income \$68,250

8. Civil engineers

Total new jobs (2008-2018): \$67,600

Median income \$77,650

7. Market research analysts

Total new jobs (2008-2018): \$70,100

Median income \$60,570

6. Computer systems analysts

Total new jobs (2008-2018): \$108,100

Median income \$77,740

5. Physicians and surgeons

Total new jobs (2008-2018): \$144,100

Median income \$94,000-\$153,000

4. Computer applications software engineers

Total new jobs (2008-2018): \$175,100

Median income: \$94,180

3. Management analysts

Total new jobs (2008-2018): \$178,300

Median income \$78,160

2. Accountants and auditors

Total new jobs (2008-2018): \$279,400

Median income: \$61,690

1. Registered nurses

Total new jobs (2008-2018): \$581,500

Median income: \$64,690

By 2018, the number of nurses is truly set to explode. (*msnbc.msn.com, September 2, 2011.*)

◆ **Skilled workers needed in state**

Jim Golembeski, executive the Bay Area Workforce Development Board in Green Bay, said a manufacturer that wanted to fill 134 entry-level jobs, paying \$15 per hour, received 850 applications but hired only 17 people. Many applicants lacked a high school diploma, could not pass basic reading, math or dexterity tests, or failed drug and alcohol tests.

The shortage of skilled workers could get worse as older people retire.

"If we don't plan for the future, we aren't going to have one," said Kurt Bauer, president and chief of Wisconsin Manufacturers & Commerce. "Without a skilled workforce, we can say goodbye to those jobs."

Golembeski said there is a gap between high schools and the working world. Many times, schools can't afford to create workshops that have factory machines, and some schools place little emphasis on manufacturing-career skills. (*fdlreporter.com, September 5, 2011.*)

◆ **Modest salary increases projected in 2012**

The one-two punch of a weak job market and a sluggish economy will deep most salary increases at a bare minimum in 2012, continuing a pattern of incremental wage growth in recent years.

Salaries will increase by a median of just 2.8 percent in 2012, up slightly from 2.6 percent in 2011 and 2010, according to Towers Watson Data Services.

When recent inflationary trends are factored in- the Consumer Price Index rose 3.6 percent during the 12-month period from August 2010 to July, for example - the projected median bump in paychecks is essentially a wash.

While most workers are likely to see their salaries remain fairly flat in 2012, employees in the South Central and West Coast regions may get slightly higher increases, as reported by Towers Watson Data Services and shown in the table accompanying this article. (*HR Magazine, Page 26, October, 2011.*)

EDUCATION TRENDS

Expectations for institutional accountability, including degree completion, continue to rise. To receive funding through grants or other means, colleges must provide evidence for student learning outcomes.

◆ **Why companies aren't getting the employees they need**

To get America's job engine revving again, companies need to stop pinning so much of the blame on our nation's education system. They need to drop the idea of finding perfect candidates and look for people who could do the job with a bit of training and practice.

The Big Myths:

ManpowerGroup, for instance, reports that 52 percent of US employers surveyed say they have difficulty filling positions because of talent shortages. But the problem is an illusion. Some of the complaints about skill shortages boil down to the fact that employers can't get candidates to accept jobs at the wages offered.

A Training Shortage:

And make no mistake: There are plenty of people out there who could step into jobs with just a bit of training - even recent graduates who don't have much job experience. Unfortunately, American companies don't seem to do training anymore. Data are hard to come by, but we know that apprenticeship programs have largely disappeared.

- 52% of US companies report difficulty filling jobs
- 47% of employers blame prospect's lack of "hard" job skills or technical skills
- 35% of companies cite candidates' lack of experience
- 25% of companies blame lack of business knowledge or formal qualifications
- 28% of companies are increasing staff training and development

The Way Forward:

Here are three ways in which employees can get the skills they need without the employer having to invest in a lot of upfront training.

1. Work with education providers.
2. Bring back aspects of apprenticeships.
3. Promote from within.

(The Wall Street Journal, October 24, 2011.)

◆ **Colleges take varied approaches to iPad experiments, with mixed results**

When observing classrooms with and without iPads, the difference ranged from barely noticeable to a stark contrast, said Dana K. Hoover, assistant CIO for communications and planning at Pepperdine. The most noticeable difference was how students in the iPad classes moved around the classroom more and seemed to be more engaged in the material.

At Cincinnati, where the study is also exclusive to faculty members, researchers say the experience has been useful so far, particularly in science and engineering courses because there are a number of useful, interactive apps available for these subjects as compared with the humanities courses.

(The Chronicle of Higher Education, October 18, 2011.)

◆ For-profit colleges have an increasing presence on the higher education landscape with quadrupled enrollments over the last ten years. Disingenuous recruitment practices, false promises of job placement, high dropout rates and a higher percentage of student loan defaults is heightening the scrutiny of related practices at all colleges. Specifically, the "gainful employment" regulation, yet to be finalized, is likely to increase accountability for program majors to link to verifiable job prospects in a much more cohesive and unprecedented way than most of higher education has experienced to date. (*Gainful Employment Regulation, Department of Education <http://www.ed.gov/news/press-releases/department-track-implement-gainful-employment-regulations>*).

◆ **In 2020, schools will carve out nondigital preserves for students to read and write with books, pens, and paper**

Educators and students will see nondigital space as a crucial part of the curriculum, recognizing that aspects of intelligence are best developed with a mixture of digital and nondigital tools. (*Mark Bauerlein, "Literary Learning in the Hyperdigital Age," Jan-Feb, 2010, p. 24.*)

◆ **The rise of teaching machines**

Summer's debut of Knewton, a new computerized-learning program that features immediate feedback and adaptation to student's learning curves.

Large numbers of students who need remedial courses and drop out, drive the appeal of software that offers individualized attention to get students through basic math and other courses that are essential to college success. "These are high-risk, low-socioeconomic-status students -exactly the kind we have to reach out to," says Mr. Regier.

Note one crucial problem: Few good studies have been done on the outcomes of these programs, particularly at the community-college level, which serve the kind of vulnerable students they are supposed to help most.

MyLabs, a series of learning programs from Pearson Education. The open learning initiative, like other programs, has a "dashboard" that gives a professor a view of the class or of a single student. (*The Chronicle of Higher Education, Page B12, May 13, 2011.*)

◆ **More students seeking job certificates**

Labor economists and some educators believe career-driven degrees should become an increasingly common choice and are advising students to pursue skills-oriented fields of study they feel offer better job opportunities.

A new report based on Florida State's employment data shows that students who earn certificates or associate of science degrees make more money in their first out of college than four-year graduates of Florida's university system. Nationally, 27% of people with licenses and certificates also earn more than the average bachelor's degree recipient, (*Georgetown University Center on Education and the Workforce.*)

Middle-skills jobs require more than a high school diploma but less than a college degree, along with significant education and training - and they make up roughly half of all US jobs. Such jobs require strong math, communications and science knowledge, in addition to "soft skills" like the ability to solve problems in teams. They do not necessarily require a four-year, or even a two-year college degree. (*Milwaukee Journal Sentinel, January 24, 2011.*)

◆ **College retention rates improving at two-year schools, declining at four-year schools**

The first-to-second-year retention rate at US two-year public colleges has risen to its highest level in 27 years of research, while the retention rate at four-year private college has dropped to its lowest level in that time, according to data from ACT, Inc.

Colleges are increasingly using learning assistance measures such as remedial courses, study groups and tutoring) to help students stay in school. Those measures have moved ahead of academic advising and first-year transition programs to become the top-ranked cluster of retention practices used at four- and two-year colleges. (www.act.org/news/2011/01/20/college-retention/, January 20, 2011.)

◆ **The briefing - report calls for focus on job training, not just college**

According to a report by the Harvard Graduate School of Education, Americans "place far too much emphasis on a single pathway to success; attending and graduating from a four-year college," even though only 30% of young adults attain that goal. The report also notes that of the 47 million jobs expected to be created in the United States by 2018, only 1/3 will require a bachelor's degree. (*The Chronicle of Higher Education*, www.chronicle.com, February 2, 2011.)

◆ **2011 National Freshman Attitudes Report - special focus: attitudes that may limit academic engagement**

More than 44% of incoming freshmen nationally agreed with the statement, "Math has always been a challenge for me," with even higher percentages agreeing among first-generation freshmen (48%) and adult, nontraditional-age freshmen (53%). "I am capable of writing a very clear and well-organized paper," a percentage that was lower among students at two-year public and private institutions (55%) than at four-year public and private institutions (65-67%).

Reflecting the uncertain economy, nearly one-third of incoming freshmen (31%) and even more first-generation freshmen (40%) arrived on campuses last fall indicating they had "very distracting and troublesome" financial problems.

Percent of freshmen students at 2-year institutions public and private in agreement:

- I would like to receive some help in improving my study habits - 56.4%
- I have a hard time understanding and solving complex math problems - 52.4%
- Math has always been a challenge for me - 53.0%
- I have difficulty organizing my ideas in a paper, and I tend to make a lot of punctuation and grammar mistakes - 39.8%
- I would like to receive some instruction in the most effective ways to take college exams - 73.6%
- I would like to receive some help in improving my study habits. - 56.4%
- I would like to receive some individual help in improving my math skills. - 52.2%
- I would like to receive some individual help in improving my writing skills - 42.7%
- I would like to receive tutoring in one or more of my courses. - 39.9%
- I would like to receive some training to improve my reading skills - 28.8%
- I would like some help selecting an educational plan that will prepare me to get a good job- 61.2%
- I would like to talk with someone about the qualifications needed for certain occupations - 6.9%

- I would like to talk with someone about the advantages and disadvantages of various occupations - 40.3%
- I would like to meet an experienced student who can show me around and give me some advice. - 38.3%

(2011 National Freshman Attitudes Report, 2011.)

◆ **Today's technology, tomorrow's classroom**

Comparing the technological wants of college students with high school students provides perspective on tech needs today and tomorrow. One of the upcoming technologies that 54% of high school students want to use today is interactive whiteboards, but only 47% of colleges are able to provide this opportunity. An upcoming trend is the usage of social networking sites by students. While only 54% of college students connect with classmates to study via social networking, 76% of high school students do. It's tech trends like these that administrators would do well to heed.

Top five technologies identified as extremely important to today's college students:

1. Wireless network 77%
2. Accessing the campus' network from an off-campus location 57%
3. Course management system 47%
4. Digital content 40%
5. Multimedia content streaming 23%

(University Business, September, 2010.)

◆ **Lecture capture moves far beyond a basic class review tool**

About five years ago, the University of Central Florida's engineering department decided it had outgrown its homemade system for distributing lectures over the Internet. "The only solution out there that was all software was Tegrity," said Ducharme, UCF's assistant dean for distance and distributed learning. "It was the absolute most amazing success story for me. Now we typically record 7,500 hours of lectures over the course of the fall and spring semesters. It's an enormous amount of content that we push out, and with a smaller staff."

The Tegrity system was expanded to the rest of the college last summer. Students can instantly access lectures from their courses through a computer browser, iPod or wireless device. Instructors require little training. To get started, they access Tegrity through the course management system, wait a second or two for the system to recognize a webcam or other external video source, enter a lecture title and begin talking to the class. Recording is automatic, and the system creates a database of searchable terms from the professor's remarks.

"One of the key aspects of Tegrity for UCF is that it's highly-scalable, meaning we can deploy it across our large student population in a cost-effective manner," said Don Merritt, interim director of UCF's Office of Instructional Resources. Professors can track sections that multiple students have bookmarked as confusing, so future lectures can be improved for clarity. Professors can tell exactly which parts of the lecture draw the most interest, and they can also see which students haven't tapped into the lecture at all. *(University Business, October, 2010.)*

◆ **As the web goes mobile, colleges fail to keep up**

Half of all college students used mobile gear to get on the Internet every day last year, compared with 10% of students in 2008, according to Educause (2010), the educational-technology consortium. But many colleges still treat their mobile Web as low-stakes experiments. Colleges

often do not realize how far their Web services have fallen behind what students are used to. For instance, a mobile app could recommend courses based on what students with similar interests have liked taking. Mobile devices, give colleges the chance to bring together all of their key services into one portal that students always have with them. (*The Chronicle of Higher Education, January 23, 2011.*)

◆ **2011 National Freshman Attitudes Report - special focus: attitudes that may limit academic engagement**

More than 44% of incoming freshmen nationally agreed with the statement, "Math has always been a challenge for me," with even higher percentages agreeing among first-generation freshmen (48%) and adult, nontraditional-age freshmen (53%).

"I am capable of writing a very clear and well-organized paper," a percentage that was lower among students at two-year public and private institutions (55%) than at four-year public and private institutions (65-67%).

Reflecting the uncertain economy, nearly one-third of incoming freshmen (31%) and even more first-generation freshmen (40%) arrived on campuses last fall indicating they had "very distracting and troublesome" financial problems.

Percent of freshmen in agreement (Fall 2010):

(Students at 2-year institutions public and private):

- I would like to receive some instruction in the most effective ways to take college exams - 73.6%
 - I would like some help selecting an educational plan that will prepare me to get a good job - 61.2%
 - I would like to talk with someone about the qualifications needed for certain occupations - 56.9%
 - I would like to receive some help in improving my study habits - 56.4%
 - Math has always been a challenge for me - 53.0%
 - I have a hard time understanding and solving complex math problems - 52.4%
 - I would like to receive some individual help in improving my math skills. - 52.2%
 - I would like to receive some individual help in improving my writing skills - 42.7%
 - I would like to talk with someone about the advantages and disadvantages of various occupations - 40.3%
 - I would like to receive tutoring in one or more of my courses. - 39.9%
 - I have difficulty organizing my ideas in a paper, and I tend to make a lot of punctuation and grammar mistakes - 39.8%
 - I would like to meet an experienced student who can show me around and give me some advice. - 38.3%
 - I would like to receive some training to improve my reading skills - 28.8%
- (2011 National Freshman Attitudes Report, 2011.)

◆ **More working women than men have college degrees, census bureau reports**

Among the employed population 25 and older, 37 percent of women had attained a bachelor's degree or more as of 2010, compared with 35 percent of men, according to new data from the U.S. Census Bureau. In contrast, among all adults 25 and older, 29.6 percent of women and 30.3 percent of men had at least a bachelor's degree.

The data come from tabulations on Educational Attainment in the United States: 2010 and not only examine gender differences in attainment but also provide the most detailed information on years of school completed ever presented by the Census Bureau, showing for each level of attainment exactly how many years of education adults have.

"The tabulations permit one to see not only the broad levels of educational attainment adults experienced, but also, for instance, if they did not receive a high school diploma, the specific level of schooling they did reach," said Sonia Collazo, a Census Bureau demographer.

In 2010, 36 percent of the nation's population 25 and older left school before obtaining a degree. This includes 15 percent of the population that didn't earn a regular high school diploma — a group sometimes labeled "dropouts." Among this group were about 1 percent of the population who reached the 12th grade, 2 percent who reached the 11th grade but still did not graduate, and 2 percent who earned a GED.

An even greater share of the 25-and-older population — 17 percent — attended some college but left before receiving a degree. At the graduate school level, 4 percent of the population left before obtaining an advanced degree.

The majority of adults (64 percent), however, finished their schooling with a regular high school diploma or college degree. The most common of these is a high school diploma, which was the highest level attained by 30 percent of those 25 and older. Another 9 percent left school with an associate's degree, and 15 percent finished with a bachelor's degree (not statistically different from those who did not earn a high school diploma). Eleven percent of the population attained an advanced degree in 2010.

Data also include levels of education cross-referenced by a wide range of demographic and socioeconomic characteristics, including age, sex, race, Hispanic origin, marital status, household relationship, citizenship, nativity and year of entry. Historical tables provide data on mean earnings by attainment level, sex, race and Hispanic origin, with data dating back to 1975 and tables on attainment levels dating back to 1940.

- In 2010, 87 percent of adults 25 and older had at least a high school diploma or equivalent, up from 84 percent in 2000.
- Of the 200 million people 25 and older in 2010, 26 million had not completed high school, while 174 million had attained at least a high school education.
- In 2010, 30 percent of adults 25 and older, or 60 million people, had at least a bachelor's degree, compared with 26 percent in 2000.
- More than half (52 percent) of Asians 25 and older had a bachelor's degree or more, higher than the level for non-Hispanic whites (33 percent), blacks (20 percent) and Hispanics (14 percent).

- Women 25 and older were more likely than men 25 and older to have completed at least high school, at 87.6 percent versus 86.6 percent.
- Among the population 25 to 29, 36 percent of women had a bachelor's degree or more, compared with 28 percent of men.
- Thirty percent of foreign-born residents of the U.S. had less than a high school diploma, compared with 10 percent of native-born residents. Nineteen percent of naturalized citizens had less than a high school diploma. At the same time, 29 percent of the foreign-born population had a bachelor's or higher degree, compared with 30 percent of the native-born population. (The percentage of native-born residents with at least a bachelor's degree was not statistically different from the percent of foreign-born residents with less than a high school diploma.) Thirty-five percent of naturalized citizens had a bachelor's or higher degree.

These data come from the Current Population Survey's Annual Social and Economic Supplement, which is conducted in February, March and April at about 100,000 addresses nationwide. (*Census.gov, April 26, 2011.*)

◆ **Students are drowning in debt**

In 2011 American student-loan debt surpassed credit-card debt for the first time. More students are borrowing more money than ever before in order to buy a commodity that is often of dubious value. They are borrowing the money from increasingly dodgy lenders. This 2009 briefing, "Drowning in debt: the emerging student loan crisis", from Kevin Carey and Erin Dillon.

Higher education has never been more expensive. The price of attending a public university doubled, after inflation, over the last two decades, and family income and student financial aid haven't kept pace. As a result, students have no choice but to borrow, and more college students are borrowing more money than ever before.

But a new analysis of federal financial aid records reveals more than just surging debt levels. Students are taking on more of the riskiest debt: unregulated private student loans. Here, students have the least protection and pay the highest rates. For-profit colleges are leading the way in this trend, and minority college students appear to be borrowing a disproportionate share. If this continues, the consequences will be severe: reduced access to higher education, diminished life choices, and increasing rates of catastrophic loan default. (*The Economist, April 15, 2011.*)

◆ **Actually going to class, for a specific course? How 20th- century. New learning technologies prompt a rethinking of traditional course structure.**

At Worcester Polytechnic Institute, administrators run seven-week immersion projects with no lecture component, in which students work in teams on projects that benefit nonprofit organizations.

"There is definitely a broader array of options available to students who wish to forgo the commute to class altogether in exchange for online classes altogether in exchange for online classes that essentially provide the same content that professors regurgitate to students in lecture."

That leads to a big question: Why even have a traditional college course? Learning outside of this structure engages students more deeply, recent data indicate. Professors talking for 16 weeks or so, assigning readings, and then testing students often appear to yield a bunch of quickly memorized facts that are soon forgotten. In an era when students can easily grab material online, including

lectures by gifted speakers in every field, a learning environment that avoids courses completely - or seriously reshapes them - might produce a very effective new form of college. (Author: Jeffrey R. Young, Date Unknown.)

◆ **Survey says 80 percent of faculty use social media in their teaching**

More than 80 percent of college faculty use some form of social media in their teaching, with online video by far the most popular application.

The survey, *Teaching, Learning, and Sharing: How Today's Higher Education Faculty Use Social Media for Work and for Play*, sought to learn exactly how higher education faculty use social media and makes distinctions across personal, in class, and professional (on the job but not while teaching) uses. The survey included questions on Facebook, Twitter, Myspace, LinkedIn, SlideShare, and Flickr, as well as blogs, wikis, video (both on YouTube and elsewhere), and podcasts.

- More than three-quarters of all faculty visited a social media site within the past month for personal use, and nearly one-half posted some content during that period.
- Faculty with more than 20 years of teaching experience are less likely to visit and less likely to post than are faculty with less than five years of teaching experience.
- Just over 90 percent of faculty use social media either for professional purposes or in their classes—or both, although in some cases the frequency is only monthly (20 percent) or rarely (19 percent).
- Nearly two-thirds of faculty has used social media in their courses— either during class or as part of an assignment— and those who teach online are more likely to do so.

However, despite the broad awareness and varied use of social media, many faculty are unconvinced it has a place in the college classroom and have concerns regarding its instructional value, privacy, and the time commitment. (*Faculty Focus*, April 22, 2011.)

◆ **Students say tablets will transform college, though most don't own tablets**

More than two-thirds of a large group of college students say that tablet computers will change the way students learn.

Only 7 percent of the college students and 4 percent of the high school seniors owned one. Still, 69 percent of the college students said that tablets will transform higher education, and 48 percent said tablets will replace textbooks—at least as we currently understand textbooks—within the next five years.

As for the actual tablet owners in the survey, 73 percent said they liked digital formats more than print for reading textbooks. Only 32 percent of non-owners felt the same way. That attitude may change once they try to study with tablets for an exam. Several pilot projects with tablets have found that students are frustrated with the difficulties in adding notes to digital books. But they still liked the machines. Nearly 20 percent of college students said they intend to buy a tablet in the next six months. (*Chronicle of Higher Education*, May 25, 2011, 12:01 a.m.)

◆ **Nine high-paying jobs you can get with an associate's degree**

If school isn't your thing, but you would love a big salary, consider a job that requires only a two-year degree. By training for a specialized healthcare, technology or trades job or heading for the police academy, you can be out of school and quickly working at a high-paying job where Monster's Salary Wizard puts the median salary at \$45,000 or more.

Test-drive the occupation by doing informational interviews and internships as soon as you're eligible.

Among the high-paying jobs you can land with an associate's degree are:

Registered Nurse

Registered nurses have more career flexibility than other associate's-level healthcare workers, but there's a catch. "You can break into the nursing field with an associate's degree, but nurses with bachelor's degrees are becoming so plentiful that there will be fewer jobs for those looking with an associate's degree," Szytko says. Seek an employer that will pay for additional education, and plan to go on for a four-year nursing degree if you want job security.

Dental Hygienist

Like many high-paying jobs you can get with an associate's degree, you'll perform the same tasks over and over when you're a dental hygienist. You'll clean teeth, talk to patients about brushing and flossing, and assist the dentist. Many dental hygienists work part time.

Respiratory Therapist

You may need only a two-year degree, but you'll have to take tough courses, like chemistry and anatomy to graduate with an associate's degree in respiratory therapy. Most respiratory therapists work in hospitals, which means evening or weekend shift work, testing and treating patients with breathing issues.

Programmer

Within IT there are a number of highly paid positions where experience and certifications can stand in for a degree. Programmers who know .Net, Visual Basic, C# or Java see salaries above the \$50,000 mark after two or three years in the field, says Ashley Waggoner, vice president of Robert Half Technology in Menlo Park, California, a professional placement firm.

Telecom Installer

This job may sound simple, but it takes a lot of technical know-how, so you'll need a two-year degree or trade-school certificate in electronics. You'll boost your salary by joining the Communications Workers of America or the International Brotherhood of Electrical Workers.

Industrial Engineering Technician

If you love math, but not enough to go to college for a four-year degree, consider an associate's degree in mechanical, electrical or industrial engineering from a program accredited by ABET. Industrial engineering techs earn the most, but salaries for electrical engineering techs aren't far behind.

Police Officer

You can get hired onto a local force if you have a high school diploma and can pass an agility test, but federal law-enforcement jobs require a college degree. Not only do police officers and sheriff's officers make good salaries (especially with overtime options), but they can also retire after 20 or 25 years in some jurisdictions.

HVAC Mechanic

While you can get HVAC training from a technical school or community college, you can get into this field with just a high school diploma by doing an apprenticeship -- in fact some states require HVAC professionals to do an apprenticeship before sitting for a licensing exam. You'll also need to become certified to handle refrigerants. An HVAC job with local government may be your best bet for a solid salary.

Paralegal

Most paralegals get into the field by earning an associate's degree or a certificate. To be happy as a paralegal, you should enjoy reading, writing and organizing paperwork for attorneys. The highest-paying jobs for paralegals are usually at large law firms located in high-cost areas. (*Career-advice.monster.com, Date Unknown.*)

◆ **Across the great divide - perspectives of CEOs and presidents on America's higher education and skills gap**

Executive Summary:

Nearly two-thirds of job openings in the next decade will require some post-secondary education. To fill these jobs, the US will need to accelerate its progress and produce 3 million more students who graduate with a post-secondary degree by the end of this decade.

A Career Readiness Gap:

- More than half (53%) of business leaders say their companies face a very or fairly major challenge in recruiting on-managerial employees with the skills, training, and education their company needs, despite unemployment close to 10% and millions of Americans seeking jobs at the time of our survey.
- Most business leaders (98%) believe the term "college" means a four-year degree. Just 13% of business leaders also think of a two-year associate's degree, and only 10% say "college" includes a career or technical credential.
- The majority of business leaders (63%) believe a four-year bachelor's degree is the important degree to achieve success in the workplace, while only 18% believe a career or technical credential and 14% believe a two-year associate's degree are important to achieve such success.
- Almost half (47%) of business leaders believe a four-year bachelor's degree offers the best return on investment for their companies and for students, and 35% felt the same way for career and vocational education. Only 18% of business leaders felt two-year associate's degrees offered a good return on investment for students and only 15% believed such a degree was a good return on investment for their companies.
- Business leaders place the greatest premium on preparing individuals for success in the workplace (56%), then providing individuals with core academic knowledge and skills (51%), and providing individuals with the workforce knowledge and skills for success in a specific career (50%).

The Path Forward:

- Credentials count. Employers value credentials and view them as reliable indicators of career knowledge and skills. Reimagining the associate's degree as inclusive of competency-based credentials, particularly industry certifications, would increase the value of the degree.

Business and Educational Institutions Support Reforms:

- When asked to select the most compelling argument for improving post-secondary completion rates, 75% of education leaders and 67% of business leaders identified the fact that we are falling behind our economic competitors as a grave concern.

(Source Unknown, March, 2011.)

◆ **Keep students hooked on your school**

Just 20 percent of two-year and 40 percent of four-year college students persist to graduation.

Four-year schools, 45 percent work more than 20 hours a week. At community colleges, 60 percent of students work more than 20 hours a week. More than a quarter work 35 or more hours weekly. Twenty-three percent of all college students have dependent children.

In his 2008 book, *Four Simple Truths*, Charles Murray argues that most young people are just not smart enough to go to college "as we know it" and should be encouraged to pursue vocational training.

Thirty-five factors were sifted to ten for the final model; Carroll's Ten Retention Factors:

1. High school record.
2. Out-of-pocket dollars paid by family.
3. Midterm grades.
4. Term grades.
5. Accessed late fees.
6. Total hours per week student is employed.
7. Open holds on student accounts.
8. Student alert form (anyone can submit.)
9. Freshman seminar survey.
10. English 170 survey.

The software runs the retention model each night against every student. Based on the day's results each student is tagged very concerned, concerned or no concern.

The primary reason community colleges (CC's) students fail to persist is the inability to balance work schedules with school demands. Gates Foundation data tell us that 60 percent of CC students work more than 20 hours a week. More than a quarter work 35 hours or more. The CC student mix is older. Family responsibilities exceed family financial support. A student's time often has non-negotiable time constraints.

Allocating 20 percent of retention efforts upstream by partnering with families, communities, and feed employers and schools. Standard formulas in use today do not accurately reflect student success and non-success at community colleges, around 20 percent. *(Today's Campus, Pages 5-12, Date Unknown.)*

◆ **2011 ACT scores show problems with college readiness**

Newly released ACT scores on tests used for college admissions show that only 1 in 4 graduates of the class of 2011 who took the exam met four key benchmarks that supposedly show readiness for success in the first year of college.

The scores, being released today, show that the achievement gap between the top-scoring students — Asians and whites — and the lowest scoring — African Americans, Hispanics and American Indians — has grown slightly between 2007 and 2011. Taken together, the snapshot of the 2011 graduating class revealed by the scores shows huge college readiness issues — that is, if you believe that a high-stakes college admissions tests can adequately tell that story. The national average composite score for 2011 was 21.1 out of a possible 36.

Only 25 percent of the graduates in the class of 2011 who took the ACT exam met or surpassed all four of the ACT College Readiness Benchmarks in English, math, reading and science. The 2010 figure was 24 percent, which ACT calls progress but others might consider relatively flat. The college readiness benchmarks are the minimum ACT test scores required for students to have a high probability of success in credit-bearing college courses — English composition, social sciences courses, college algebra or biology. They are based on grades earned by students in college.

Here are the ACT benchmarks (out of a possible score of 36 in each subject): for English, a score of at least 18, for reading a score of at least 21, for math a score of at least 22 and for science a score of at least 24. Twenty-eight percent of test takers in the 2011 high school graduating class did not meet any of the readiness benchmarks, which remained the same from 2010. (*Washington Post, August 17, 2011.*)

◆ **What the lost decade of wages means for colleges and their graduates**

A snapshot of American living standards from the Census Bureau offered plenty of statistics to show just how bad the last decade was for the paychecks of most Americans. For higher education, the report was mixed: good news for students on the degree payoff, but another healthy dose of reality for colleges that believe current upward trends in tuition prices will continue unabated.

First for students, the report underscored yet again the lifetime economic benefits of getting a college degree. The poverty rate for Americans in their 20s with a college degree in 2010 was 8 percent, compared to 23 percent for those in the same age group with just a high-school diploma (the poverty line was set at \$22,314 for a family of four in 2010).

While the poverty rate for those in their 20s with a bachelor's degree has increased by two percentage points since 2002, it jumped by six points for those with a high-school diploma during the same time period. For both groups, the poverty rate has improved as they moved into their 30s, but those with a high-school diploma are still much more likely to live in poverty even 10+ years after high-school graduation.

For jobless college graduates, their degree and the time, effort, and money invested in it seems like a convenient punching bag. If colleges want to continue to sell themselves as a ticket to success in the future, they need to do a better job at defending their degrees against the rising chorus of the "Don't Go to College" crowd.

The jobless young are an angry band not just in the United States, but around the world, as shown by the protests in Europe and the Middle East this past year. This pain is the result of a changing global economy, not a bad college education.

Rising family wealth during the 2000s, helped greatly by inflated home prices, allowed colleges to continue to pump up their prices. The census numbers and the nonstop bad news on housing show those days are over. Add to that the fact that there are likely to be substantial cuts in federal student aid in the name of deficit reduction in the coming years. (*The Chronicle of Higher Education, September 18, 2011.*)

◆ **Is a college degree worth the price? Census bureau has the answer**

A new study from the Census Bureau, Education and Synthetic Work-Life Earnings Estimates.

According to the study, education levels had more effect on earnings over a 40-year span in the workforce than any other demographic factor such as race or gender. The estimated impact on annual earnings between a person with a professional degree versus one without a high school diploma was about \$72,000 a year. (*www.dailyfinance.com, September 3, 2011.*)

◆ **Bachelor's degree loses its luster**

According to The New York Times, almost two out of every 25 people older than 25 have a master's degree. The master's is the most rapidly growing degree in the country with the number of such degrees awarded more than doubling since the 1980s.

According to a report from the US Census Bureau, those with a master's degree can expect to earn \$2.5 million throughout their adult working life. This figure is not significantly higher than the \$2.1 million those with bachelor's degrees can expect.

Additionally, both of the estimated earnings for master's and bachelor's holders are much higher than the figure for a person with only a high school degree, who can expect to earn \$1.3 million over the course of his or her adult working life. (*www.eaglenews.org, September 7, 2011.*)

◆ **Tomorrow's academic libraries: maybe even some books**

But what those crowds of students need and want from the library has changed. They don't come for books. They come for study space and company. "Bookless learning center."

Called the Library Learning Terrace, the center will be open around the clock to give students access to the library's digital resources as well as a place to gather.

Many colleges and universities have replaced some stack space with a learning commons, a dedicated spot within the library where students can come to work and study together. Most academic libraries have a social-media presence too, with the aim of interacting with students and serving them virtually. (*The Chronicle of Higher Education, Page B19, May 13, 2011.*)

◆ **Learning today: the lasting value of place**

To help students keep down costs and facilitate their transition to professional life, a number of four-year institutions have established three-year degree options. More institutions are adopting experiential education in response to calls from students and employers for a model that prepares students to navigate the world economy successfully. Cooperative education opportunities.

Peer-learning environments. - By its very nature, place-based education promotes peer learning because students can easily share their perspectives, disagreements, and emotions about what they are learning in the physical classroom.

Exposure to diversity, research opportunities, campus and community engagement, and chance encounters. (*The Chronicle of Higher Education, Page B25, May 13, 2011.*)

◆ **Enrollment up at UW colleges**

Enrollment at the University of Wisconsin Colleges is up 1.6 percent this year over last year. The tally includes 1,595 students enrolled at UW Colleges Online. That's a 19 percent increase. (*West Bend Daily News, Page A8, September 22, 2011.*)

◆ **College admissions report predicts US enrollment increases through decade's end**

These are just some of the realities revealed in "2011 State of College Admission," a new report from the National Association for College Admission Counseling, or NACAC.

Based on an annual survey of secondary and post-secondary institutions, the report predicts that, while high school graduation rates have essentially leveled off, college enrollment is expected to rise—from the 20.4 million students currently enrolled in degree-granting institutions of higher education to 23 million in the 2019-20 school year.

The increase will be due primarily to an increase in non-traditional age students, the report's authors say. However, underrepresentation continues among racial and ethnic minorities in the traditional college-aged population. Specifically, the report says, while Black and Hispanic students constituted about 34 percent of the traditional college-aged population, they represented only about 27 percent of enrolled college students.

Given these disparities, high school counselors should look for ways to involve others in their schools to bring greater equality in college enrollment for fresh high school graduates from diverse segments of the population, said David Hawkins, director of public policy and research at NACAC.

While the traditional 18- to 24-year-old population will continue to be the largest portion of college students, enrollment among 25- to 34-year-olds and those 34 and older will rise 21 and 16 percent, respectively. In order for the demographics to shift more rapidly among the traditional college-aged population, it has to change at the high school level, starting with the curriculum, the survey suggests.

Among other things, the NACAC report also found that:

- The number of students applying to college grew in 2010. Seventy-three percent of colleges saw growth in the number of applications in 2010, while 19 percent saw decreases.
- 25 percent of fall 2010 freshmen had submitted seven or more applications for admission, up from 23 percent in fall 2009 and 22 percent the year before.
- 48 percent of colleges put students on wait lists last fall, versus 39 percent the year before.

- Acceptance rates were down one percentage point to 65.5 percent last fall, whereas in previous years the acceptance rates were all above 66 percent.
- 38 percent of colleges reported increases in the number of early decision applications, whereas, in previous years, half of all colleges reported such increases.
- Online applications grew, with colleges and universities getting an average of 85 percent of their applications online for the fall 2010 admission cycle, versus 80 percent the year before and 72 percent the year before that.

(Diverse – Issues in Higher Education, October 24, 2011.)

◆ **New data shows undergraduate degree likely worth no more than a technical college degree**

Average hourly rate rises with education - except an undergraduate degree is worth no more than a technical college degree:

Technical College - \$55 (n=1,952)

Undergraduate - \$55 (n=4,138)

The United States is a service company premised on the ideal that more education always means a higher income. However, this data calls that ideal into questions. However, it is very clear from our data that an undergraduate degree is, in strictly financial terms, often a poor investment.

According to the College Board, the tuition and fees of an undergraduate degree amount to about \$40,000 to public schools. This implies that Thumtack's service professionals have spent at least \$3.2 billion on degrees that have not boosted their earnings above workers with only a technical degree.

There are at least 20 million service professionals in the United States, which suggests that the current service sector workforce has spent at least \$240 billion on undergraduate degrees that have resulted in incomes no different than individuals with a technical degree. (*www.thumtack.com, November 14, 2011.*)

◆ **Leaving college with a degree and thousands in debt**

Americans are graduating from college today with mountains of debt that will take years to dig out from under. Two-thirds of 2011 graduates of four-year colleges accumulated an average of \$34,000 in debt each, according to FinAid.org - more than triple the amount of a 1992 graduate. For those who went on to medical or law school, the final cost could be 10 times that amount.

Until they get rid of the debt, "it is inconceivable that they'll ever be able to buy a home," said Steven M. Dunne, a Philadelphia consumer-bankruptcy lawyer who last year paid \$36,000 to chip away at his student loans, \$5,000 of that interest. "In the last 20 years, tuition has risen 130 percent, four times the rate of inflation," Dunne said. "Private colleges typically cost \$38,000 a year with room and board.

"It is putting the economy in a dangerous position, delaying life-cycle events like homeownership, marriage, and having children," he said. The result has been fewer household formations, on which the demand for housing - both existing homes and new construction - depends.

With fewer first-time buyers in the pool, current owners who want to move cannot sell. With so many heavily indebted graduates moving back with their parents, people who thought they had emptied the nests cannot buy smaller houses.

William E. Brewer Jr., president of the National Association of Consumer Bankruptcy Attorneys, said that the amount of student borrowing crossed the \$100 billion threshold for the first time in 2010, and that total outstanding loans exceeded \$1 trillion for the first time in 2011.

Part of the problem is that most students do not know what they are getting into. The new Consumer Financial Protection Bureau is working on a one-page financial-aid shopping sheet (see it at <http://consumerfinancial.gov>) to help students figure out how much in federal loans and private loans they should consider taking on, and what kind of loan repayments will follow after graduation.

"They need to start teaching a course in high school about the hidden provisions of student loans and credit cards and how to make it financially in the world. It would be the most important class anyone ever took," Dunne said. Many of these struggling graduates are employed, but they are not earning what some of the schools had promised. (*The Inquirer, February 17, 2012.*)

◆ **Community-college students perform worse online than face-to-face**

Community-college students enrolled in online courses fail and drop out more often than those whose coursework is classroom based, according to a new study released by the Community College Research Center at the Teachers College at Columbia University.

The study, which followed the enrollment history of 51,000 community-college students in Washington State between 2004 and 2009, found an eight percentage-point gap in completion rates between traditional and online courses.

Students in an online course had an 82 percent chance of completing the course, compared with a 90 percent chance in face-to-face courses. Among students in remedial courses, the gap was even wider - 85 percent of students completed their face-to-face courses, but only 74 percent completed the same course online. (*The Chronicle of Higher Education, July 18, 2011.*)

FOOD AND AGRICULTURE INDUSTRY TRENDS

Trends and forecasts in food and agriculture point to opportunities for the U.S. as well as in Moraine Park's district where agriculture plays a vital role in the economy.

◆ **Indoor vertical farming will make cities more self-sustaining**

"Living" skyscrapers with entire floors dedicated to growing food could soon appear in city skylines. In an increasingly urbanized future, they will bring food growers and consumers closer together, and also extend "farmland" into a third dimension: skyward. A 30-story skyscraper on one city block could potentially feed 50,000 Manhattanites, using technologies available now. (*Cynthia G. Wagner, "Vertical Farming: An Idea Whose Time Has Come Back," Mar-Apr 2010, pp. 68-69.*)

THE NEW MEGATREND: SUSTAINABILITY

Business megatrends impact how companies compete. Such transformations arise from technological innovation or from new ways of doing business, and many factors can spur the process of change. Business megatrends may emerge from or be accelerated by financial crises, shifts in the social realities that define the marketplace, or the threat of conflict over resources. Examples of past megatrends are globalization, the IT revolution, and the quality movement.

◆ **The building industry is going through a sweeping transformation to be "green".** The LEED (Leadership in Energy and Environmental Design) program through the US Green Building Council is increasingly being adopted for new construction. Retrofitting existing buildings to be energy efficient is also a significant trend, fueled in part by readily available government grants and rebates.

Sustainable technologies - also called cleantech or greentechy - improve financial performance by using less energy and materials, having less waste and toxins. Cleantech is now an established investment category in the public markets, and Greentech companies reportedly now receive a third of all equity investments. New market sectors include thin-film solar, biofuels, bio-plastics, carbon trading, wetlands banking and water quality trading. (Progressive Investor, Sustainable business.com.) New occupations are being recognized whose purpose is support green economy growth. (<http://www.onetonline.org>)

◆ The impact of the green economy has resulted in changes to work and development of unique worker requirements for green new and emerging occupations. There is a need for educational programs to ensure that academic programs include learning activities that enable students to acquire these skills. The report reflects opportunities for new programs, continuing education topics and updates to current programs. See the O*NET Green Task Development Project report for a listing of task for each occupation. (November 2010, <http://www.onetcenter.org/reports/GreenTask.html>).

Implication for education: The sustainability trend suggest opportunities for course and program revision and development across the curriculum to prepare students for changing workforce needs, and provide continuous skills development for workers to maintain their workplace effectiveness. (*Supplier Sustainability Assessment, Wal-Mart, <http://walmartstores.com/Sustainability/9292.aspx>.*)

◆ **Mukwonago company to specialize in repairing wind turbine gears**

As the wind industry expands across the country, so will the need to repair the inner workings - the gearboxes - inside turbines. A new Wisconsin company, Gearbox Express, has been formed to

specialize in the repair and remanufacturing of wind turbine gearboxes that could need replacing every five to 10 years.

The company is retrofitting a 43,000-square-foot industrial building in Mukwonago. The company has raised \$1.8 million from investors. Aided with a \$1.8 million Small Business Administration loan and a \$3.4 million loan from the State of Wisconsin.

The company will focus on wind turbines but will also fabricate gearboxes for a variety of industries, he said. The gearboxes can weigh 35,000 pounds or more and require a crane to change out. (*Journal Interactive of the Journal Sentinel, October 30, 2011.*)

TECHNOLOGY TRENDS

◆ Trends in higher education

It's clear that moving data storage and some software functions to the cloud saves money for most institutions. (*EDUCAUSE: ECAR Research Bulletin 4, 2010.*)

The electronic delivery of books, journals, and data continues to be experimented with on campuses as a way to hold down costs for students. The competition in e-readers, in particular, is heating up and higher education is a prime market. (*EDUCAUSE: ECAR Research Bulletin 2, 2010.*)

Digital technology now makes it easier for instructors to write their own 'flexbooks', incorporating text, simulations, video, and more. (*Argus Leader, June 7, 2010.*)
(*Planning for Higher Education, Oct-Dec, 2010.*)

According to PEW Internet, 94% of community college students have cell phones, with 65% of that group using their cell phones to access the Internet or send and receive emails. (*The Source on Community College Issues, Trends & Strategies, Page 10, August 7, 2011.*)

The simple answer is that no one "killer app" has emerged that fits every professor's teaching style, every research discipline, or every administrative office on campus, according to several people who attended the meeting. Turn the devices into so-called "clickers," using an app that lets students use their phones during classes to buzz in answers to quiz questions or discussion prompts. (*The Chronicle of Higher Education, Pages B6-B7, May 13, 2011.*)

More germane to the classroom, however, Google Docs simplifies the process of collaborative writing. During peer workshops, each group's members share their documents. They can work simultaneously on one author's document at a time; any comments or edits made by one group member are immediately seen by the entire group. There's a chat system built in, so collaborators can discuss the changes they're making. (*The Chronicle of Higher Education, Pages B8-B10, May 13, 2011.*)

Whatever tools you use, it is "cloud" computing that truly changes the game for classroom teaching. In a nutshell, cloud services store copies of your files on their servers while the files are simultaneously stored on your machines' hard drive. (*The Chronicle of Higher Education, Page B28, May 13, 2011.*)

Columbus State University in Georgia, more than 70 percent of CSU students prefer to use their cell phones as their primary way to access and receive university information. (*Campus Technology, November 1, 2011.*)

◆ **Smart grid model standard: smart idea**

Homes, commercial and institutional buildings, and industrial facilities are about to get "smarter" when it comes to electrical use. The, ASHRAE/NEMA Standard 201P, Facility Smart Grid Information Model, will control systems in homes, buildings, and industrial facilities to manage electrical loads and generation sources in response to communication with a "smart" electrical grid, as well as to communicate information about those electrical loads to utility and other electrical service providers. The creation of this standard is a strategic element in driving development of a nationwide smart electrical grid while increasing energy efficiency, occupant productivity, and cost-effectiveness in safe secure buildings." (*Buildings, September, 2010.*)

◆ **Amazon announces digital-textbook rentals**

Amazon has rolled out an e-textbook-rentals program, which could bring more attention to the emerging model of treating textbooks like online subscriptions.

Students can now download temporary copies of textbooks on Amazon's Web site for reading on a Kindle e-book reader or on a computer, tablet, or smartphone running free Kindle software. The system lets customers specify rental periods lasting anywhere from a month to a year. Amazon argues that the digital rentals can save students up to 80 percent compared with traditional print textbooks.

Students will also be able to refer to any margin notes and highlights they made in their digital textbooks after the rental period is over. Amazon has tens of thousands of titles available for digital rental from major publishers like John Wiley & Sons and Elsevier and Taylor & Francis. CourseSmart, a digital-textbook seller started by major textbook publishers, allows rentals but only for periods of six months or more. (*The Chronicle of Higher Education, July 20, 2011.*)

◆ **QuickWire: MIT to open center on 'mobile learning,' with Google's backing**

The Massachusetts Institute of Technology's Media Lab has announced the creation of the New Center for Mobile Learning, with start-up support from Google. The research center, to be led by three professors at MIT, is focused on building innovative mobile technologies in education, such as interactive games for children that use GPS. The first project involves creating new features and versions of Google's App Inventor for Android, which allows programmers to easily build applications for the company's smartphone operating system. (*The Chronicle of Higher Education, August 18, 2011.*)

◆ **Smartphones have influenced higher education**

According to a May 2011 survey by the Nielson Company, about 37% of mobile consumers have a smartphone, with a majority of these individuals using either an Android or an Apple model. Bloomberg BusinessWeek reports that one of the most useful apps for degree seeking smartphone users is MyPocketProf. Using this tool, students can sync their class notes to their phone. This will allow them to review their course material on the go. (*US News University Directory, August 10, 2011.*)

◆ Technology replacing books?

All educators in North Fond du Lac are equipped with iPad2s and have been trained to use them in a variety of ways. Teachers are using them in the classroom to help deliver curriculum, engage students more in the learning process and make use of mobile technology to become more efficient and effective professionals, said Superintendent Aaron Sadoff.

The Oakfield School District handed out netbooks to all high school students on the first day of school, with plans to expand the technology into the middle school as well. Students are required to take their netbooks to class. "Instead of needing funds to go on field trips, we can take virtual tours of places around the globe. We can chat with business professionals and people from different cultures."

Students can lease the netbooks for a \$50 annual fee and will be able to take them with them when they graduate. School administrators say that even in hard economic times, it is worth the \$60,000 investment.

"The goal of the 21st Century learning initiative is to prepare our students for the global society that they will encounter after graduation and to keep them abreast of the ever-changing technology that they face on a daily basis," Klassy said.

Ripon High School began issuing netbooks to all freshmen a year ago. The district's Lumen Charter High has MacBook's, and every student in Grades 3 to 5 has a netbook, said Administrator Richard Zimman.

"Now that half to two-thirds of our students are equipped with a mobile device, teachers and students alike have similar expectations about how to use the technology and what for.

The Campbellsport School District purchased 60 netbooks last year and another 30 this year, using Library Common School Funds. The Wisconsin Department of Public Instruction allows schools to use up 25 percent of their common School fund allocation on computers.

A relaxed policy at Fond du Lac High School also allows students to use their laptops, iPads and iPods in school for educational purposes. As for providing students with netbooks, Superintendent James Sebert says, "It is on the horizon for us, but we are not there yet."

New Holstein is working on BYOD (Bring Your Own Device) program. Two years ago, the district moved from the typical work-station computer to laptop wireless computers. All teachers are issued laptops for school use, said District Administrator Bill Van Meer.

Laconia High School provided all its students with netbooks last year. While some classes are able to be taught using exclusively online resources, other classes may use a blended approach using a text and online resources, said Principal Wayne Weber.

As with all change, keeping up with today's technology is an adjustment for Oakfield students, parents, and educators, Klassy said. "The most rewarding result thus far is the increased motivation in the students due to the use of technology which is relevant to their everyday lives," she said. (*The Fond du Lac Reporter, Page D1, September 18, 2011.*)

◆ **The slow-motion mobile campus**

Getting iPads and iPhones in the hands of college students is the easy part; rebuilding campus infrastructure to support mobile devices is expensive. And as Stanford's experience shows, getting professors, students, and staff to work together to explore the educational potential of mobile devices is a slow, uneven process, more suitable in some fields than others.

It will be up to students, not college officials, to decide how to learn. "We're just trying to make sure that the iPad is working well for the students who are using it," he says. "They're going to come up with great new ways of using the iPad in curriculum and education. They're going to be the ones who find out what is most useful for them. We're not going to be the ones to tell them that." (*The Chronicle of Higher Education, Pages B4-B5, May 13, 2011.*)

◆ **Information technology on campuses: by the numbers**

Ownership of Handheld Devices That Access the Internet in 2010:

27% own and use daily

15% own and use weekly

How Students Like to Use Technology to Learn in 2010:

- 1) Listening to audio or watching video content
- 2) Running internet searches
- 3) Using controllable programs like video games, simulations
- 4) Engaging in text-based conversations, e.g. text messaging
- 5) Contributing to Web sites, blogs, wikis, etc.
- 6) Creating audio or video content

Most Students Own Laptops in 2010:

63% Internet-capable handheld device

84% Laptop computer

(*The Chronicle of Higher Education, Pages B22-B23, May 13, 2011.*)

◆ **Campus & industry - innovators awards 2012 - mobile learning report**

Mobile Learning Report:

Now in the fourth academic year of its ACU Connected mobile learning initiative, Abilene Christian University (TX) has issued a 36-page report (available at [acu.edu/technology/mobile learning](http://acu.edu/technology/mobile%20learning)) that documents its research projects, shares responses from members of the campus community, and divulges results from multiple student and faculty surveys regarding the mobility work.

According to the results of a fall 2010 survey referenced in the report, 80 percent of faculty members bring mobile devices to class: 84 percent regularly use the devices in class; and half of faculty reported using the devices in every class. Between 80 and 90 percent of students responded that mobile device usage has improved collaboration their academic experience, improved communication with teachers, and provided them with increased control of their learning environment. (*Campus Technology, Page 10, December, 2011.*)

◆ **Apple looks to transform e-textbooks**

Tech innovator introduces iBooks, iBooks Author apps. Apple also announced iBooks Author, a free software application for Macintosh computers with custom templates to help authors create and publish their own digital textbooks.

Apple is broadening its iTunes U program beyond audio and video lectures by adding an app for the iPad, iPhone and iPod Touch that allows professors to create full online courses, with assignments, books, quizzes and syllabi. Previously available only for the higher-education market, Apple is letting K-12 schools participate for the first time. E-books represent less than 10% of the textbook market for the K-12 market, according to Simba Information, a market research firm.

Though Apple is targeting the new textbooks at any age or grade level, the initial emphasis is on high school textbooks. Books will be priced at \$14.99 or less. Early publishing partners include Pearson, McGraw-Hill and Houghton Mifflin Harcourt, which collectively control 90% of the market, with some titles available immediately. (*USA Today, Cover Page, January 20, 2012.*)

◆ **Mobile strategies: does your company need an app?**

With the growing popularity of mobile tablets and smart phones, more businesses must recalibrate how they interact with customers and prospective customers.

The mobile devices are changing the way business is conducted.

Nearly 50 percent of all web traffic will come through mobile devices by 2013, according to Sara Santiago, president of Milwaukee-based Roll Mobile, a mobile marketing agency. "Mobile devices are going to continue to become more sophisticated and will be the definitive connection between our offline and online lives," Santiago said. "Mobile is not just

Changing how we connect online; it also changes how we work, how we shop, how we connect with other people and how we share experiences." Most mobile web traffic originates from a search engine, and 71 percent of smartphone users who see or hear a television, radio or print advertisement will do a mobile search to find your business, Santiago said.

Because the mobile web and smartphone app development industry is an emerging, changing realm, the costs for a company to obtain its own app are all over the board. There are no established norms in the market yet. Local developers said they have quoted projects ranging in costs from \$5,000 to \$45,000, depending upon the functionalities that are needed.

Budget will play a determining role in where a business starts with its mobile strategy and where it can grow, she said. (*Buztimes.com Milwaukee and www.biztimes.com, December 9, 2011.*)

Dated: April 23, 2012.