

Institutional Research

2009 MORAINÉ PARK

ENVIRONMENTAL SCAN

"The best way to see beyond the horizon is to 'Scan' it."

**Final Report
August 2009**



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NOTE: Detailed 2009 Environmental Scanning Sector Quarterly Reports can be found under the Environmental Scanning link on Park Place.

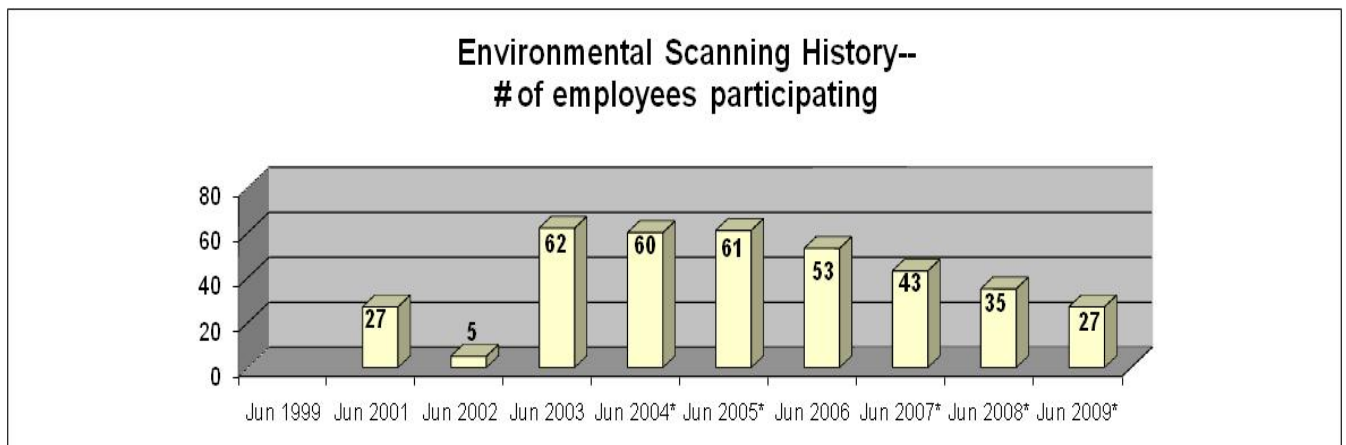
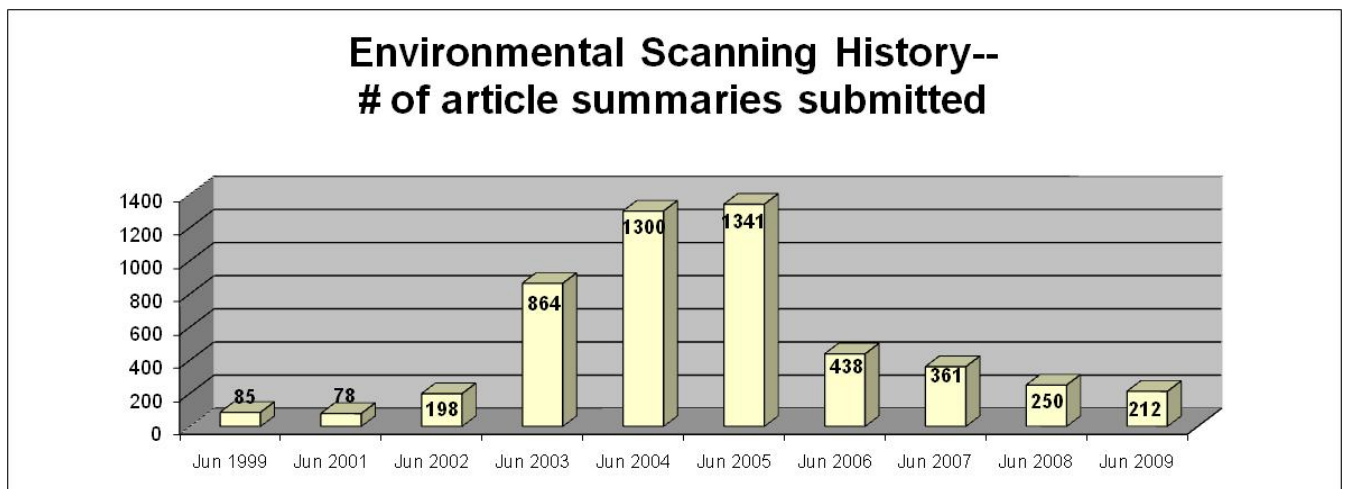
Article summaries are stored both electronically and in files at Institutional Research-FDL.

Environmental Scanning

is a necessary tool for planning the long-term strategic direction of Moraine Park Technical College. The 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 timely, actionable trend information can help the college overall, as well as individual teams, develop and implement goals and strategies. Encouraging employee participation in scanning not only broadens the scope of information sources, but also provides employees with a sense of ownership in contributing to the future organizational direction.

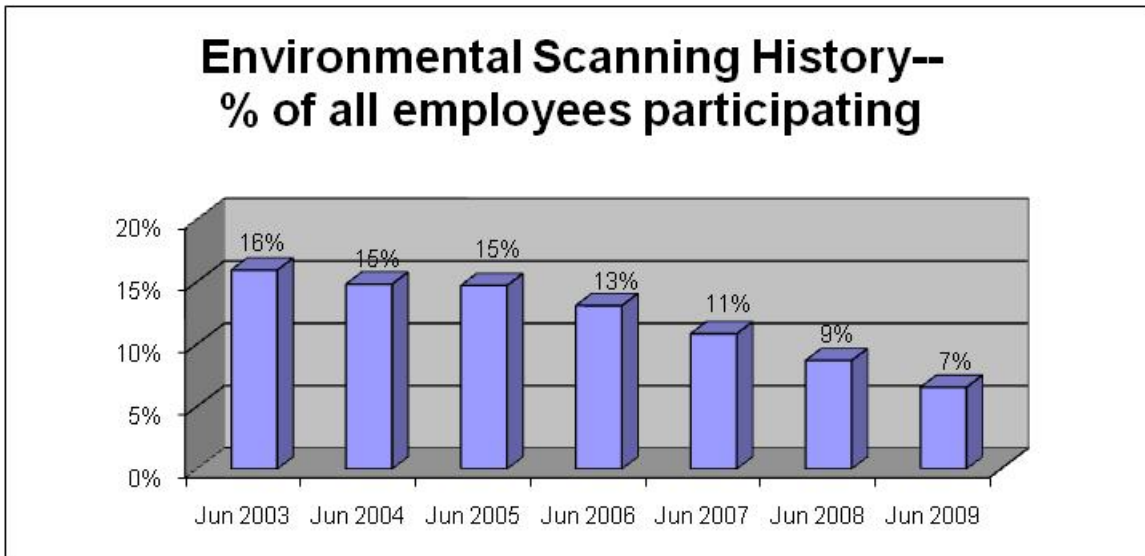
Moraine Park Technical College 10 Year Scanning Stats

Article submissions have been down the past few years. The Banner implementation, less time to devote to scanning trends, and fewer reminders to scan could be some factors for the lower numbers.



*Several work teams submit as a team vs. individually. In 2009, 6 articles were unassigned or un-highlighted when submitted.

Moraine Park Technical College 2009 Scanning Stats (con't)



*# of employees submitting scanning information
divided by total number of college employees
(excluding call staff)

6 out of the 8 Primary and Support Systems contributed articles in 2009

17 Work Teams contributed articles in 2009 (37% of teams in database)

(46% of work teams participated in 2008; 50% in 2007; 63% in 2006; 67% in 2004 & 2005)



ENVIRONMENTAL SCANNING AND EMERGING TRENDS

Key assumptions, trends or events identified through the 2008-2009 environmental scanning process are listed below.

NOTE: The implications listed for each trend or event are initial impressions and can be used as discussion points. Many more opportunities and challenges can be evaluated and added for each trend/event. ASK: How will these trends impact the College overall, our enrollments, marketing, technology, programs, students, funding, etc.?

Trend/Event	Implication
POPULATION/DEMOGRAPHICS/SOCIETAL SECTOR	
DEMOGRAPHICS/POPULATION	
<p>Last year we discovered that among workers nationally aged 55 or older, a substantial 38 percent do not expect to retire until age 66 or older, according to the Employee Benefit Retirement Institute's 2006 Retirement Confidence Survey. Over the past year, workers are delaying retirement even more due to the economy. An AARP survey conducted in April 2008 found that nearly 20% of workers 55 to 64 plan to delay retirement. People in their 50s and 60s are going back to work just because of the downturn. RetireeWork.com, a website launched in 2007 that matches retired workers with jobs, has generated 1.5 million new hits in the past year. Many would-be retirees are also retraining for new careers. According to the Fond du Lac Retirement and Departures Intentions survey, 48 percent of workers plan to retire within 15 years and over 25 percent plan to actively train for a new career field.</p> <p>Source: #4795, <i>USA Today</i>, 08/27/08; #4750, <i>FDL Retirement & Departures Intentions Survey</i>, 2008; #4859, <i>HR Magazine</i>, 09/08</p>	<p>To help ease the impact of the economic downturn and the trend of Baby Boomers delaying retirement, more companies are considering phased retirement programs to address skills shortages and to help employees transition to an easier and more affordable retirement, according to a new survey by HR consultancy and outsourcing firm Hewitt Associates.</p> <p>The trend of Baby Boomers training for new careers shows that there is a need to design educational programs specifically designed with the Boomer in mind.</p>
<p>The youth population aged 16 to 24, will grow nationally 2.9 percent over the 2004-14 period. As the Baby Boomers continue to age, the group aged 55 to 64 will increase by 36 percent or 10.4 million persons, more than any other group. The group aged 35 to 44 will decrease in size reflecting the birth dearth following the Baby Boom generation.</p> <p>Source: #4768, <i>Occupational Outlook Handbook 1</i>, 2008; #4873, <i>USA Today</i>, 11/10/08</p>	<p>As the age group between 55 to 64 retires, taking their knowledge and skills with them, skill shortages that began before the recession could have an even greater impact on businesses in the future. Previous statistics have shown that Wisconsin has an older workforce and lacks the number of younger people to replace these Boomers. This "graying" of our workforce may bring a greater need for succession planning, more flexible schedules, and phased retirement as indicated in the previous entry.</p>

POPULATION/DEMOGRAPHICS/SOCIETAL SECTOR
DEMOGRAPHICS/POPULATION (con't)

Neil Howe, who coined "millennials" (Gen Y) with William Strauss, predicted that the generation's preference for consensus-building and nonstop, digital communication will alter business and political landscapes. According to an article in *Office Pro*, the lack of cross-generational interaction will contribute to a very real talent shortage in the future. Because of the pending generational shift from Boomers (who have all the knowledge) to Gen Ys in the workplace, businesses need to focus on building professional relationships with their employees while developing employee's skills.

Source: #4745, *washingtonpost.com*, 07/06/08; #4799, *Office Pro*, 08/09/2008

The tools necessary to retain workers from the various generations are different. The College may need to think cutting edge to provide an appropriate work atmosphere. Experts suggest that businesses will need to accommodate the millennial generation by creating more team projects, invest in technology, and provide personal development programs. The transfer of Baby Boomer and retiree knowledge to younger employees through mentoring opportunities will also be very important.

Hispanics constitute the largest and fastest-growing minority in the United States, now numbering 45.5 million, or 15.1 percent of the U.S. population, according to 2007 data released in May 2008 by the U.S. Census Bureau. Projections call for the Hispanic population to nearly triple in size and account for most of the nation's population growth through 2050, according to a February 2008 report by the Pew Research Center and the Pew Hispanic Center. Hispanics will number 128 million by 2050, researchers predict, making up 29 percent of the U.S. population.

U.S. Population by Race and Ethnicity:

Percentage of total

White

1960 85%; 2005 67%; 2050 47%

Hispanic

1960 3.5%; 2005 14%; 2050 29%

Black

1960 11%; 2005 13%; 2050 13%

Asian

1960 0.6%; 2005 5%; 2050 9%

Major Occupations Among U.S. Hispanics: Production, transportation and material moving 17.6%; Service 24.1%; Sales & office 21.1%; Natural resources, construction, and maintenance 19.4%; Management, professional, and related 17.8%

Source: #4856, *Human Resources*, 9/2008

Although Wisconsin and our district has been predominately white, the ethnic minority population has been growing much faster than the overall population, especially the Hispanic population. Previous environmental scans revealed that the number of Latinos more than doubled from 1990 to 2000 in Wisconsin and has grown by at least 8% since then. We will need to continue reviewing how we attract and retain this student population. The need for bi-lingual language and literacy resources in addition to opportunities to learn Spanish (for non-Hispanics) and English for Hispanics will grow.

In terms of recruiting & retaining Hispanic workers, experts suggest the following:

- Affinity group support
- Community visibility and organizational affiliation
- Education & mentoring
- Language assistance.

Trend/Event	Implication
EDUCATIONAL/ENROLLMENTS SECTOR	
EDUCATION OVERALL	
<p>In 2000-2001, the latest year for which Education Department data are available, the nation spent \$140 billion on four-year public universities and just under \$30 billion for public two-year colleges. However, community colleges enroll 6.5 million degree-seeking students, or nearly half (47%) of all college undergraduates. In 2004-05, the average total expenditure per full-time-equivalent (FTE) student at a community college was \$10,500 compared with \$31,900 at a public 4-year college or university. The instructional cost per FTE student at community colleges was \$4,100 compared with \$8,000 at public 4-year colleges and universities.</p> <p>Source: #4754, <i>USA Today</i>, 2008; #4810, <i>Community Colleges</i>, 2008</p>	<p>Although public two-year colleges' costs per FTE have been lower than four-year public universities, demand has been increasing especially during the recession to re-train the workforce. Federal and state funding has always been lower for two-year colleges and as this funding becomes a smaller percentage of the overall budget, technical colleges will have to look more to other sources including grants, private fundraising, and developing stronger relationships with untapped markets including alumni. The stimulus money might help but will it be enough?</p>
<p>The first look ever at how the USA's economic downturn could affect education finds that states probably will cut an estimated 18.5% of spending over the next three years, an \$80 billion drop that could eliminate 574,000 publicly funded jobs.</p> <p>Source: #4946, <i>USA Today</i>, 02/11/09</p>	
<p>As the national unemployment rate soars, retraining is becoming increasingly popular. As part of the House stimulus package, the federal government would send the states an additional \$1 billion to provide training and re-employment services to 270,000 dislocated workers. But retraining is not a panacea. Many jobless fear they won't find good positions after their classes end and they'll be back at square one. Starting over in a new career can often mean entry-level positions with lower salaries and less-desirable shifts. This is especially true for those in manufacturing, many of whom pulled in more than \$25 an hour with just a high-school diploma.</p> <p>Source: #4922, <i>cnnmoney.com</i>, 01/27/09</p>	
<p>The U.S. secondary and post-secondary market is losing ground compared to rivals in other countries and based on opinions from the public.</p> <ul style="list-style-type: none"> • In S. Korea 93% of all students graduate from high school on time. But in the United States, almost one-quarter of all students - more than 1.2 million individuals each year - fail to graduate. Once the world leader in secondary-school education, the United States now ranks a desultory 18th among 36 nations examined by the Organization for Economic Co-operation and Development. • Data shows that between 2003 and 2006, the USA slipped from fifth to seventh in the percentage of adults, ages 18-24 enrolled in college, and from seventh to 10th in the percentage of adults 25-34 holding an associate's degree or higher. <p>(continues on next page)</p>	<p>The decline in American education threatens U.S. competitiveness in the global marketplace, say experts. They say that if the gap grows, our standard of living will fall relative to those countries that are doing a better job educating their students and future workforce.</p>

- A group of college presidents and other top education officials says the USA's "economic, democratic and social health" could worsen over the next several decades if more Americans don't earn a college degree. The group is pushing to increase the percentage of young people who earn a degree from 40% to 55% by 2025.
- China, now takes in more students than it sends abroad. It is the result of a concerted governmental push to enhance China's appeal as a college destination and a study-abroad locale. China has a plan not only to establish world-class universities, but in the process to internationalize higher education. In July, Chinese officials outlined plans to attract half a million foreign students by 2020—just under current United States levels. The United States is now China's third largest source of students.
- Based on a survey of 1,009 Americans in late December, the results suggest public trust in higher education is wavering:
 - 53% say colleges could spend less and still maintain quality. (All colleges across the nation have in recent years been spending a greater share of their revenue on expenses other than instruction, including computing centers, student services, administrative salaries, and lawn care.)
 - 55% say colleges worry more about the bottom line than educational mission.

To reverse this trend (which was first reported in the 2007 Environmental Scan), more collaborative efforts of government, business and education need to occur according to those studying this disturbing trend. (#4433)

Source: #4936, *The Chronicle of Higher Education*, 09/19/08; #4887, *USA Today*, 11/19/08; #4896, *USA Today*, 12/03/08; #4905, *USA Today*, 12/11/08; #4947, *USA Today*, 02/04/09; #4938, *USA Today*, 01/15/09

EDUCATIONAL/ENROLLMENTS SECTOR

EDUCATION OVERALL (con't)

Even though U.S. education might be losing ground, a community college or technical college education is still a good investment and demand is increasing based on these recent statistics:

- The average community college tuition and fees this past fall increased at less than the inflation rate, according to the annual College Board reports on college costs and student aid. For full-time students, the average tuition and fees charges at public two-year colleges in 2008-09 was \$2,402, marking an increase of 4.7 percent or \$108, according to the College Board. The Consumer Price Index for roughly the same period was 5.6 percent.
- The poor economy is ratcheting up anxieties about college affordability at a time when more Americans than ever say a college degree is essential to success. Based on a survey of 1,009 Americans in late December, 67% in 2008 said most people who are qualified for college don't have the opportunity to attend vs. 47% in 2000.
- Economic conditions are influencing the plans of college-bound students, according to an online survey of 593 teens in February 2009. Among respondents, 85% were high school juniors or seniors. Twenty-seven percent changed their plans within the past year and will now start their degrees at local two-year community colleges instead of four-year-schools.
- A survey by ApplyWise.com, an admissions counseling service, and Next Step magazine found that 70% of families are seeking more economical college options, either because their financial situation changed in recent months or because they are afraid it will.

Wisconsin's associate degrees, especially our occupational associate degrees, offer a very strong pay-off for the workers who hold them. The median wage for Wisconsin workers with occupational associate degrees was \$18.18 compared to \$17.08 nationally. Finally, and perhaps most important, almost one in 10 Wisconsin workers holds an occupational AA degree. That's almost twice the national share. In fact, Wisconsin ranks fifth in the nation in terms of the AA attainment of the adult workforce, and moves up to No. 3 considering the share of workers with an occupational AA degree.

About 44 percent of all students nationally are enrolled at two-year colleges for their pocketbook-friendly tuition rates. A four-year education is not always the ticket to a swollen bank account either. The highest-paying jobs typically held by those with associate degrees: Computer Specialist, \$59,480; Dental Hygienist, \$58,350; Radiation Therapist, \$57,700; Nuclear Medicine Technologist, \$55,840; Diagnostic Medical Sonographer, \$52,490; Registered Nurse, \$52,330; Engineering Technician, \$49,440

Source: #4902, *Community College Times*, 11/08/08; #4947, *USA Today*, 02/04/09; #4969, *USA Today*, 4/2/09; #4967, *jobs.aol.com*, 4/29/09; #4855, *USA Today*, 10/27/08; #4807, *Center on Wisconsin Strategy*, 2008

Participation in postsecondary education improves the quality of the local, state and national society.

Emphasizing the Return on Investment for a technical college education to parents, students, and high school counselors will ease the fears of these stressed economic times.

EDUCATIONAL/ENROLLMENTS SECTOR
ENROLLMENT MANAGEMENT/RECRUITMENT

The web plays an important role for college students who intend to transfer to another higher education institution. Sixty-seven percent used Web searches to help develop their list of colleges and half listed the Web as their primary research tool. Students also expressed interest in online tools to help them research student aid and facilitate the transfer process. Sixty-two percent asked for an online calculator to help estimate the cost of attending, while 48 percent requested a calculator for estimating scholarships. Forty-two percent requested an online tool to estimate the credits they could transfer to the prospective college. Forty-seven percent showed interest in a separate Web site section with resources to help transfer students complete their enrollments.

Source: #4814, *Community College Times*, 09/26/08

As co-founder and digital dean of YOU University, a new (and free) provider of campus video tours for invited institutions, Ron Reis estimates that 90 percent of online campus tours are stuck in Web 1.0, with static text links, still photos, and no allocated resources. "Schools are proactive about teaching their students with the latest technology and about having the latest technology, but they're not using that technology," he says. Reis sees the tour as "singlehandedly the most important element" of a college website. Research has shown that tour-related buttons get the most clicks, which is not surprising. "Those looking at college now were 13 when they iPod came out," he says, adding that viewing streaming video is part of their everyday lives.

Source: #4787, *University Business*, 09/2008

College admissions are becoming more tech-savvy. College admissions offices say they are using more social media to recruit students:

Social networking

2007: 29%; 2008: 61%

Video Blogging:

2007: 19%; 2008: 48%

College admission officials are keenly aware that their target audience grows more tech-savvy with every passing year. Based on surveys of hundreds of colleges by the Center for Marketing Research, only 15% last year did not use social media, down from 39% the previous year. The number of colleges using social networking sites or putting video on their blogs more than doubled from 2007 to 2008. 41% of colleges used blogs in admissions. There was also a dip in the number of colleges using social networking sites to research potential students. 17% did in 2008 vs. 21% in 2007. The effectiveness of social media tools in recruiting students is not clear but the topic deserves attention. Social media tools, like Facebook, Twitter, and blogs, are key to communicating with this younger generation of students.

Source: #4980, *USA Today*, 4/29/09

Utilization of more Web 2.0 technologies in the College's marketing and recruitment efforts could assist in delivering our message to the tech savvy Gen Y audience to increase our appeal and competitiveness against other colleges. These young adults are digital natives and expect others to use these technologies to communicate with them.

EDUCATIONAL/ENROLLMENTS SECTOR
ENROLLMENT MANAGEMENT/RETENTION

Both high school and college rigor needs to be evaluated to ensure students' success in the workforce.

- A poll from the magazine, *Strong American Schools*, found 80 percent of students surveyed said that they would have worked harder if their high school had set higher expectations. Fifty-one percent said they feel strongly about this. Only 14 percent of the remedial students said that their high school prepared them extremely well for college. Many remedial students also reported that their high school did not do a good job of letting them know what skills they would need to do well in college. Nearly four in 10 students said their schools did a poor or fair job of helping them understand what level of academics were necessary to succeed in postsecondary education.
- Disconnected Curricula: Many high school graduation standards do not meet the demands required by college entrance or placement requirements, but that is not usually publicized by high schools or colleges. Most states have large gaps between the two sets of standards. One set of community college standards is embodied in placement tests, which are usually set at a higher level than high school graduation requirements.
- In 2005, even as 86 percent of whites graduated from high school, just 44 percent of the state's African Americans graduated.
- Community College Survey of Student Engagement, found that more than half of 310,000 students on more than 500 campuses reported they got little to no attention from advisers in their first four weeks. Nearly half (47%) said they had never talked with instructors outside of class about class, grades or assignments.
- Nearly one in five college seniors and 25% of freshmen say they frequently come to class without completing readings or assignments, a national survey shows. And many of those students say they mostly still get A's. Students report spending about 3 1/2 hours a week preparing for each class. That's about half what instructors expect from a typical student. Of those who frequently didn't do homework, 29% of freshmen and 36% of seniors got mostly A's.

Source: #4828, *Strong American Schools*, 2008; #4871, *USA Today*, 11/10/08; #4910, *Barriers to College Success*, 2008; #4806, *Center on Wisconsin Strategy*, 2008; #4754, *USA Today*, 2008

Catching up costs billions: One-third of American college students have to enroll in remedial classes. The bill to colleges and taxpayers for trying to bring them up to speed on material they were supposed to learn in high school comes to between \$2.3 billion and 42.9 billion annually. Analyzing federal data, the report estimates 43 percent of community college students require remediation. The cost per student runs to as much as \$2,000 per student in community colleges.

Source: #4786, *The Reporter*, 09/15/08

The under-prepared learner and grade inflation statistics and trends have been noted for many years in the Environmental Scanning reports. In high school, experts recommend encouraging more students to take advanced math and science courses and continue with those courses in college. In a 2006 Scan, it was noted that employers need workers with "pocket protector" skills with strong math and science backgrounds along with problem-solving abilities.

As indicated in the second trend on this page, remediation is expensive. A more collaborative effort still needs to occur among government, business, and both secondary and post-secondary education to help reverse these trends. The new prepared learner initiative within the WTCS is one step in the right direction.

EDUCATIONAL/ENROLLMENTS SECTOR
ENROLLMENT MANAGEMENT/RETENTION

Since the 1970s, the reading and math gap between the USA's highest and lowest-performing students has generally shrunk according to new results. The **gaps** on a 500-point scale:

Reading

9-year-olds: 1971-108, 2008-94
13-year-olds: 1971-92, 2008-95
17-year-olds: 1971-117, 2008-114

Math

9-year-olds: 1971-93, 2008-86
13-year-olds: 1971-100, 2008-86
17-year-olds: 1971-91, 2008-76

U.S. students' basic math and reading skills overall have improved slowly and surely over the past 30 to 40 years. There have been sharp increases among many of the nation's lowest-performing students - especially in the past four years. Scores released by the National Assessment of Educational Progress find that decades-long achievement gap between white and minority students shrank between the 1970s and the first part of this decade but has barely budged since 2002, when the federal government compelled public schools to address it through the No Child Left Behind education reform law. The overall findings suggest mixed results from No Child Left Behind. In most cases, the lowest-achieving one-fifth of students closed their reading and math performance gap with the highest-achieving one-fifth. Low-achieving students are making greater gains than high achievers.

Source: #4979, *USA Today*, 4/29/09

Although the gap between the lowest-performing and the highest-performing students has decreased, students are still not prepared for college and the workforce. According to some experts, U.S. schools still fail to ensure that all of our young people get the kind of education that we know will increase their chances of success.

EDUCATIONAL/ENROLLMENTS SECTOR
FINANCIAL AID/COST OF SUPPLIES

College students would save nearly 40 percent, or an average of \$245 a semester, on the cost of their college textbooks if they shopped online, according to a new report from the New York state comptroller's office, reports the Buffalo News. The rising cost of college textbooks has increased an average of 6 percent a year, or twice the rate of inflation.

Source: #4894, *eCampus News*, 12/23/08

In a previous Environmental Scan, other alternatives have been offered to help the effort of lowering book costs such as renting a semester's worth of textbooks and offering course readings online. Online textbooks, textbook rental programs, and online course readings are value-added alternatives that can enhance the students' college experience and pocketbook at the same time.

EDUCATIONAL/ENROLLMENTS SECTOR
FINANCIAL AID/COST OF SUPPLIES

More than 80 percent of non-college goers reported that the availability of financial aid was either "extremely" or "very" important in their decision not to enroll. Thirty-eight percent of non-college goers expressed a need to work, and 24 percent of these students said they faced the obstacle of family obligation-- such as raising a child or caring for a sick relative.

Source: #4913, *Inside Higher Ed*, 11/14/09

As a college, we are in the position to help ease the experience of applying for financial aid through informative, easy to understand brochures, workshops, electronic services, etc. To reach these non-college goers, we may need to learn how to promote the benefits of financial aid, grants and scholarships in new and creative ways to show this market that a college education can still be within reach.

As college costs soar, students are charging more educational expenses to plastic. A new study by Sallie Mae, finds that the average undergraduate carried \$3,173 in credit card debt last year, the highest level since Sallie Mae began collecting this data in 1998. In 2004 students carried an average of \$2,169 in card debt.

The higher the grade level, the greater the card debt. In 2008, college seniors with at least one credit card graduated with an average of \$4,138 in card debt, up 44% from 2004. Freshmen's average credit card debt jumped 27% to \$2,038.

Because the economy has deteriorated since then, it's likely that 2009 (card debt) could look a little bit worse. In the past 10 years, tuition and fees at public four-year colleges have climbed 50%, to an average of \$6,585 a year, according to the College Board. Lenders are also pulling back on private loans, making it harder for some students to pay for college. Student loans backed by the federal government are still readily available. If students can't get private loans, they turn to credit cards.

Percentage of college students who have credit cards:

1998, 67%

2004, 76%

2008, 84%

Source: #4986, *USA Today*, 4/13/09

Managing college debt and finances could be potential lunch-n-learns or evening workshops for current and potential students and their parents.

EDUCATIONAL/ENROLLMENTS SECTOR
DELIVERY OPTIONS/INSTRUCTURAL TECHNOLOGY

Virtually reality now includes several different types of computer-based experiences ranging from fully immersive environments with complex HMD gear and body suits, to realistic PC-based programs. Regardless of hardware and software used, all types of VR aim to simulate a 3-D location through computer-generated imagery and to give users a powerful sense of "being there", "taking control", and interacting personally with the environment and its contents through one or more senses such as vision, hearing and touch. Many occupations require learning so that workers can perform safely in dangerous situations. Because it is extremely realistic, VR creates high levels of active learner involvement with detailed and accurate visual scenes. VR is currently being used for training in high-risk occupations such as law enforcement, military, firefighting, emergency medical response, aviation and space exploration, marine exploration, nuclear energy, hazardous materials handling, dangerous driving situations, mining and railway operations.

Even healthcare is using VR. Aurora's electronic intensive care unit is where it takes brain, not brawn, to care for patients. Virtual nursing has become a way for hospital systems to retain experienced caregivers who would have otherwise left the profession because of the physical demands.

Source: #4815, *Techniques*, 10/2008; #4898, *Human Resources Recruitment and Retention*, 01/02/09

Per research, the cost of VR is becoming more affordable for colleges. Usable desktop VR applications can be developed in-house with an equipment investment cost of around \$3,000 plus a high-end off-the-shelf desktop computer and some software.

From online courses to kid-friendly laptops and virtual teachers, technology is spreading in America's classrooms, reducing the need for textbooks, notepads, paper, and in some cases even the schools themselves. The Internet is also a catalyst for change. U.S. enrollment in online virtual classes reached the 1 million mark last year, 22 times the level seen in 2000. Projections show that 50 percent of high school courses will be taught online by 2019. Online tutoring is also expanding rapidly.

Source: #4744, *washingtonpost.com* 07/07/08

Use of these technologies is second-nature to the digital native Gen Y and they will expect the same options when they go to college. Keeping up with the latest technologies will mean increased resources, funding and faculty training and support.

Digital lecture capture and broadcast solutions (technology that records, streams and stores what happens in the classroom for concurrent or later viewing) have been around for only about 10 years, but are poised for healthy growth. Frost & Sullivan (www.frostandsullivan.com) research analysts estimate that the market (which amounts to \$25 million currently) will quadruple by 2013. It's still dominated by a few key players, however: Sonic Foundry holds a hefty 40 percent-plus market share, and only a handful of vendors provide the lecture capture systems in use at most major universities.

Source: #4992, *Campus Technology*, 6/2009 (see next entry also)

Digital lecture capture is a complementary tool to current teaching methods and per the next entry, students are very interested in this technology and would even pay for it. This technology could allow students to be more selective in their choice of educational institutions. However, it requires resources, not only in infrastructure costs and training but also time.

EDUCATIONAL/ENROLLMENTS SECTOR

DELIVERY OPTIONS/INSTRUCTURAL TECHNOLOGY (con't)

A full 82% of undergraduates kindly offered that they'd be willing to entertain an alternative to showing up to class and paying attention in real time. The study suggests not only willingness but a "clear preference" among undergraduates for "lecture capture". The study was sponsored by University of Wisconsin-Madison's E-Business Institute and based on a survey of more than 29,000 undergraduate and graduate students. Over 60% of respondents said they would pay for lecture capture capabilities, and of those, 69% said they would be willing to pay on a "course-by-course" basis rather than bundled fees.

Source: #4798, *Inside Higher Ed*, 09/23/08

Cloud computing and mobile devices are the emerging technologies primed to make the biggest splash on college campuses in the coming months, according to EDUCAUSE's 2009 Horizon Report. The annual report identifies six technologies or practices predicted to enter the education mainstream within three "adoption horizons" over the next one to three years.

Happening Now:

The first horizon, which evaluates technologies likely to have the biggest impact over the next year, spotlights mobile devices and cloud computing. The latter is a process by which multiple data servers are connected to increase computing and storage powered across networks. Colleges employ the technology as a research tool, tapping into server farms on partner campuses to solve complex operations.

On the Cusp:

The second horizon, the concept of geo-coded data or "Geo-Everything," as the report labels it-enables devices to record their precise location and save that data along with captured media (photographs, for instance). Researchers see a potential use for the technology in the sciences, where students could tag and plot important research information from mobile computing devices while conducting field research, for instance.

Not Far Off:

The third horizon, and the farthest looking one addressed in the report, considers the gradual emergence of "Semantic-Aware Applications" and "Smart Objects." Semantic-aware applications aim to create an easier, more efficient means of scouring the Web for information. Rather than search using keywords---the most common method--semantic-aware applications would enable students and other computer users to search for answers in the context of specific questions. The final technology is "Smart Objects." These are described as physical objects that record and report information about how they are made, what they do, who owns them, and other objects in the world that are like them.

Source: #4953, *Community College Journal*, April 2009

See previous page.

Although many of these technologies are geared more towards the bigger universities, several could be adaptable for technical colleges in some capacity. Technical colleges have a history of keeping pace with technology advances in order to offer students and staff with current, in demand applications. However, rapid growth of these emerging technologies could strain budgets.

EDUCATIONAL/ENROLLMENTS SECTOR
ACADEMICS

Environmental sustainability efforts and programs continue to expand across community college campuses in the U.S. Several community colleges have signed on to use the new national Sustainable Building Advisor Program in their continuing education curricula, beginning this coming academic year. The focus of the program is primarily to train building professionals to make their practices more sustainable and less harmful to the environment. It entails a nine-month course taught during one weekend a month. The \$2,195 fee includes instruction, campus parking, bus transportation and field trips.

Through the program, students learn to:

- Identify key sustainable-building practices.
- Apply Leadership in Energy and Environmental Design (LEED) guidelines and other standards.
- Analyze costs and benefits of incorporating sustainable building measures.
- Tap financial incentives and technical assistance offered by governments, utilities and nonprofit organizations.

Source: #4746, *Community College Times*, 07/04/08

This program would be a great opportunity for Moraine Park as communities are becoming more “green” orientated. This course could benefit students who are currently enrolled in or are graduates of our programs including Civil Engineering Technician and Building Trades. Other potential targets include home builders and facilities personnel. At this time, no Wisconsin schools are offering the program (see website: <http://www.nasbap.org/prospectiveschools.html>).

Trend/Event	Implication
ECONOMIC/ BUSINESS /OCCUPATIONAL/LABOR FORCE SECTOR	
EMPLOYMENT/JOBS	
<p>Even in the midst of a recession and layoffs, experts still predict work force shortages in the near future:</p> <ul style="list-style-type: none"> • The water industry could lose as much as 40 percent of its employees to retirement in the next few years, according to the American Water Works Association. • As Baby Boomers prepare to retire, it's possible that more than half of the existing construction work force will retire by 2012. • In 2005, 15 prominent business groups warned that we will have a lack of experts for U.S. competitiveness, and the country would need 400,000 new graduates in the so-called STEM (science, technology, engineering and math) fields by 2015. • Statewide hospitals are seeing an average work force shortage of about 9 percent, and expect it to get worse over the next decade. The most difficult positions for hospitals to fill due to shortages are physical and occupational therapists. • Lower birth rates, a retiring Baby Boomer population and a growing number of younger adults leaving northeast Wisconsin for sunnier pastures...These trends will bring a shortage of skilled labor, and the effects of that shortage will drastically avail themselves in the next 10 years according to the <i>New North B2B</i>. Based on the FDL Retirement & Departures Intentions Survey data from the labor availability research, Fond du Lac County will see employment departure levels near 50 percent over the next 15 years. Where Fond du Lac would have anticipated losing roughly 66 percent of its work force over the next 30 years, the number appears closer to 85 percent. <p>Source: #4845, <i>The Business Journal</i>, 10/10/08; #4925, <i>Community College Times</i>, 01/16/09; #4752, <i>FDL Retirement & Departure Intentions Survey</i>, 2008; #4755, <i>Action Sunday</i>, 07/06/08; #4757, <i>Science News Report</i>, 2008; #4824, <i>New North B2B</i>, 09/2008</p>	<p>Experts indicate that one reason for these shortages is there aren't enough training programs available for certain occupations. The industry leaders and technical colleges may need to explore innovative ways to build a pipeline of talent.</p> <p>On a positive note, jobs requiring the marketable skills and degrees we already train people for will continue to be in demand after the economy recovers, especially those in healthcare.</p>
<p>Women are holding onto their jobs more than their male counterparts in the recession as the types of jobs women hold generally offer more stability. Three-quarters of the workers in the healthcare and education sectors are women. Employers added 536,000 workers in those two fields in 2008. Men represent 93 percent of workers in construction and 72 percent in manufacturing. Employers cut 632,000 construction jobs in 2008.</p> <p>Source: #4931, <i>The Reporter</i>, 11/14/08</p>	

ECONOMIC/ BUSINESS /OCCUPATIONAL/LABOR FORCE SECTOR

JOB SKILLS

The U.S. Bureau of Labor Statistics (BLS) and energy leaders reveal what “green” fields are expected to grow:

- Engineers: 11 percent projected growth, \$44,790-\$145,600 annually, depending on specialty. Chemical engineers who work with biofuels, electrical engineers who design power plants, mechanical engineers who find better ways to capture air and wind energy will be in demand.
- Nuclear Power Reactor Operators: 11 percent projected growth, \$35,590-\$75,240 annually.
- Industrial Machinery Mechanic: 9 percent projected growth, \$42,350-median annual income. Someone has to install the solar panels and repair wind turbines, and industrial machinery mechanics are often the ones who get the jobs.
- Electricians: 7 percent projected growth \$44,780-median annual income
- Line Workers: 7 percent projected growth, \$52,570-median annual income
- Welders: 5 percent projected growth, \$32,270 median annual income.

The U.S. economy currently generates more than 750,000 green jobs -- a number that is projected to grow five-fold to more than 4.2 million jobs over the next three decades. A report, according to greenbuildinginsider.com, found that more than half (419,000) of current green jobs were found in the categories of engineering, legal, research, and consulting. The second largest category was renewable powered generation (127,000 jobs), followed by agriculture and forestry. Green jobs could contribute 10 percent of new jobs through 2038, representing the fastest growing job segment in the U. S. economy.

The report, *Green Recovery: a Program to Create Good Jobs & Start Building a Low-Carbon Economy*, issued in the fall of 2008 by the University of Massachusetts and the Center for American Progress, estimates job opportunities in the clean-energy and energy-efficient sectors will increase by 20 percent over the next 10 to 15 years.

Source: #4743, *Yahoo hot jobs*; #4861, www.greenbuildinginsider.com, 10/21/08; #4954, *Community College Journal*, April 2009

Moraine Park already offers programs for many of these “green” jobs, however there are even more opportunities to investigate and research new programs and training options along with integrating more “green” concepts within current curriculum. This includes the Sustainable Building Advisor program as mentioned on page 12.

ECONOMIC/ BUSINESS /OCCUPATIONAL/LABOR FORCE SECTOR

JOB SKILLS (con't)

The long-term shift from goods-producing to service-providing employment is expected to continue. Service providing industries are expected to account for approximately 18.7 million of the 18.9 million new wage and salary jobs generated over the 2004-14 period. These figures will most likely be updated due to the downturn in the economy but the trends will still remain once the economy moves in a positive direction.

- **Education and health services:** projected to grow faster, 30.6 percent, and add more jobs than any other industry supersector.
- **Healthcare and social assistance:** will grow by 30.3 percent and add 4.3 million new jobs. Employment growth will be driven by increasing demand for healthcare and social assistance because of an aging population and longer life expectancies.
- **Professional and business services:** will grow by 27.8 percent and add more than 4.5 million new jobs.
- Employment in **computer systems design and related services** will grow by 39.5 percent and add almost one-fourth of all new jobs in professional, scientific, and technical services.
- **Goods-producing industries:** employment in the goods-producing industries has been relatively stagnant since the early 1980s. Overall, this sector is expected to decline 0.4 percent over the 2004-14 period.
- **Construction:** Employment in construction is expected to increase by 11.4 percent, from 7 million to 7.8 million.
- **Manufacturing:** employment change in manufacturing will vary by individual industry, but overall employment in this supersector will decline by 5.4 percent or 777,000 jobs.

Source: #4772, *Occupational Outlook Handbook, 2008*

As the economy shifts to service-producing industries we may also need to provide short-term training opportunities to assist individuals in updating their skills for both new and replacement positions.

The three factors that will have the greatest impact on Wisconsin's employment during 2006-2016 are: aging population, technological change, and globalization. The labor force in Wisconsin is expected to grow slower compared to growth in the past several decades.

Source: #4776, *Wisconsin Department of Workforce Development, 07/2008*

These trends will continue to drive the long-term historic shift to the need for more skilled workers in the state to remain competitive. According to the DWD, the aging of the state's population, for example, will have two conflicting effects on the labor market. On one hand, there will be an increased demand for healthcare and social assistance services. On the other hand, these employment opportunities may go unfilled as employers struggle to find qualified workers to fill the jobs vacated by retiring Baby Boomers.

ECONOMIC/ BUSINESS /OCCUPATIONAL/LABOR FORCE SECTOR

JOB SKILLS (con't)

Top Ten Industries with the Most New Jobs, 2006 to 2016:

- Ambulatory Health Care Services: 29,840
- Administrative & Support Services: 24,090
- Food Services & Drinking Places: 22,000
- Hospitals, Including State & Local Government: 20,950
- Social Assistance: 20,410
- Professional, Scientific, & Technical Services: 17,270
- Educational Services, Including State & Local Government: 11,104
- Religious, Grant-making, Civic, Prof. & Similar Organizations: 10,900
- Nursing & Residential Care Facilities: 10,230
- Specialty Trade Contractors: 7,910

*Note: These projections maybe lower due to current economic downturn.

Source: #4779, *Wisconsin Department of Workforce Development, 07/2008*

Occupational Outlooks:

- Dental laboratory technicians, cabinetmakers and bench carpenters, and welding, soldering, and brazing machine setters, operators, and tenders are among the production occupations with the fastest growth rates between 2006 and 2016.
- Overall employment in Management, Business, and Financial occupations is projected to grow by 8.7 percent, adding 21,600 new jobs over the decade.
- Within this major occupational group, the three occupations to exhibit the fastest growth are personal financial advisors, financial analysts, and employment, recruitment, and placement specialists.
- Construction and Extraction occupations will have 150,100 jobs in 2016 compared to 138,200 in 2006, an increase of 11,900 jobs.
- There will be nearly 26,200 job openings in Installation, Maintenance, and Repair occupations during the decade. The following occupations are expected to grow the fastest during the ten-year period: medical equipment repairers, tire repairers and changers, and industrial machinery mechanics.

*Note: These projections maybe lower due to current economic downturn.

Source: #4780, *Wisconsin Department of Workforce Development, 07/2008*

These growing industries can provide economic workforce development training opportunities in addition to possible increased enrollments in current or new programs that support the occupations within these industries.

These occupational projections align with many of the programs Moraine Park currently offers. As the demand for these occupations continues (even during the economy downturn), enrollments for our programs should remain constant and increase. Is there other programming/training needed to fill the growing needs for these occupations?

ECONOMIC/ BUSINESS /OCCUPATIONAL/LABOR FORCE SECTOR

JOB SKILLS (con't)

People pay to keep cars going rather than buy new. Parts and service departments are expected to see a revenue gain of about 3% this year. Motorists are hanging on to vehicles longer. The average age of the entire U.S. fleet of cars and trucks averaged a record 9.2 years in 2007 for the second year in a row.

Source: #4937, *USA Today*, 02/09/09

This is good news for our auto service partners. Our Automotive Technician training will need to remain relevant to this trend...repairing older vehicles and dealing with the issues related to holding on to vehicles longer.

Computerworld's report on the eight hottest skills for 2008 highlighted information technology (IT) such as project management, help desk and technical support, IT security, data center technologies, networking and telecommunications, indicating a renewed demand for IT skills in the U.S. labor force. A new opportunity exists for two year colleges. The Cisco Networking Academy offers a turnkey solution for community colleges in these challenging times. The academy provides an opportunity for two-year colleges to meet the renewed interest in IT careers by providing IT curricula licensed at no cost to qualifying institutions.

These programs include built-in online assessments and rich-media simulation tools for the learner. Each curriculum maps to industry-recognized certifications, which positions graduates to compete for jobs.

The curriculum can be easily integrated into existing degree or certification programs, and Cisco provides tools so that instructors are trained to deliver the program consistently worldwide. The outcomes are workforce-ready students who can work on any network, not just a Cisco network, and who are eligible for a variety of jobs and career options.

Source: #4924, *Community College Times*, 1/16/09

Technical colleges find themselves uniquely positioned in this economy to respond to learners seeking to enhance their skills and their degrees especially in information technology. However, as demand goes up, resources have been going down, therefore alternative solutions need to be investigated such as the Cisco Networking Academy.

ECONOMIC/ BUSINESS /OCCUPATIONAL/LABOR FORCE SECTOR
HUMAN RESOURCES—GENERAL

A recent survey by Towers Perrin claims to debunk some common workforce myths:

- The survey of 90,000 employees in 18 countries found that, contrary to a "workforce myth", most workers are not stressed out. Of those polled, 68 percent said their reaction to workplace stress ranged from being energized by it to being "neutral" to it. Towers Perrin says the survey also explodes the "myth" that most Americans are workaholics who "live to work," while the truth is that most people work to support their families.
- People work an average of 45 hours a week in the United States, with almost one-fifth routinely working 51 hours or more.
- Nearly 60 percent of those surveyed said they work to support themselves and their families, and only 18 percent said work was the most important aspect of their lives.
- Eighty-six percent of respondents to the Towers Perrin survey say cell phones, laptops and other personal electronic devices help balance their lives instead of making work a 24/7 "virtual prison".
- 86 percent of workers said they liked or loved their jobs; 77 percent liked or loved their companies; and 73 percent liked or loved their bosses.

Source: #4748, *HR Magazine*, 2008

The results of this survey show contrary viewpoints to statistics reported in previous scans. Although this survey may show some truth for many in the workforce, stress, dissatisfaction, and round-the-clock connectedness are still real issues for some workers. Based on previous environmental scans, experts suggest that employers offer competitive salaries, career-development opportunities, work/life balance options, wellness offerings, and boundaries regarding connectiveness to ensure happy employees.

A growing number of government and private-sector employees are turning to telework centers, usually government-funded spaces that offer the perks of an office, including copy machines and water coolers, much closer to home. In federal circles, the telework movement got a boost last year when the GSA (General Services Administration) announced a plan to have 50 percent of its eligible employees telecommuting from home or at a center at least one day a week by the end of 2010.

Source: #4762, *Washington Post*, 07/27/08

Telecommuting has been a trend for years. Private-sector employers have been experimenting with this option successfully but now some government employees are also trying it. Could the concept of telecommuting from home be an option for Moraine Park in the future as technologies emerge to make it more of a reality? Telecommuting or more flexible working arrangements will probably be demanded more by employees to improve the work/life balance.

Even in an economy that is cutting jobs, executives still view employee retention as their number one concern. Reasons for losing top performing employees: The top reason was unhappiness with management; limited opportunities for advancement and lack of recognition were second. Inadequate salary was third. Employees want to see their efforts rewarded and acknowledged.

Source: #4941, *Atlanta Business Chronicle*, 01/13/09

Experts say that in today's business environment managers need to be extra attentive to the need of their teams or risk losing their most valuable employees.

<p>HUMAN RESOURCES—BENEFITS/WELLNESS/POLICIES</p>	
<p>The average employee's health care costs, including premiums and out-of-pocket expenses, will increase 8.9% in 2009. That's well above the rate of inflation and average salary increases. About a third of large employers plan to offer health savings accounts linked to high-deductible plans in 2009.</p> <p>Source: #4866, USA Today, 10/14/08.</p>	<p>The high cost of health insurance has squeezed both the College's and our staff's budgets over the years. As indicated in previous scans, employers and employees can save money in health-care costs in the long-run simply by encouraging exercise and wellness. The College's Welltech committee sponsors many activities to help promote healthier lifestyles.</p>
<p>HUMAN RESOURCES—RECRUITMENT/RETENTION</p>	
<p>An annual average of 27.2% of Americans 16 and older volunteered in their communities from 2005 through 2007, a study by the Corporation for National and Community Service found.</p> <p>Source: #4869, USA Today, 10/07/08</p>	<p>The College encourages community involvement of staff by sponsoring local leadership programs and is involved overall with many community partners. But, how can the College encourage more involvement and volunteering?</p>
<p>Adjunct ranks have exploded at universities and colleges. In 1975, adjuncts made up less than one-third of all faculty. Adjuncts made up half of faculty, according to the U.S. Department of Education fall staff survey (2008). The move has helped many institutions cut spending. It costs up to 80% less to hire a part-time faculty member than a full-time faculty member. At the same time, the trend has raised questions about equity and the impact on students. The national debate on adjuncts also touches on the educational impact. Some researchers have found that adjuncts have a negative effect on students because adjuncts are less accessible. A 2008 study by researchers found that first-year college students enrolled in introductory courses taught by part-time faculty were more likely to drop out. The report said adjuncts may be less connected to the institution and may also be teaching courses elsewhere, making them less available to students. Researchers also have found positive effects. Adjuncts may have a positive impact on students who are not in their first year of study because the instructors bring real-world experience to the classroom, or specialize in teaching.</p> <p>Source: #4975, <i>Journal Sentinel</i>, 5/10/09</p>	<p>There are both pros and cons to hiring adjunct faculty at the College. To overcome the cons of the adjuncts being less accessible, less connected with the institution, and have more student drop-outs, the College has developed a call-staff orientation conducted at the beginning of the school year. Can we expand this training to give adjuncts more exposure to College resources and help with teaching methods throughout the academic year? Can studies be conducted to analyze the course retention rates of full-time vs. adjuncts to verify if the trend of lower retention rates in intro classes exists at MPTC so strategies can be implemented accordingly?</p>

Trend/Event	Implication
TECHNOLOGY SECTOR	
<p>High-speed Internet access is so important to the welfare of U.S. consumers that America can't afford not to offer it—free of charge to anybody who wants it. There's a social obligation in making sure everybody can participate in the next generation of broadband services because, increasingly, that's what people want. Only 38% of rural households are broadband customers. For urban and suburban areas, the numbers are much higher: 57% and 60% respectively.</p> <p>Source: #4784, <i>USA Today</i>, 08/20/08</p>	<p>With the new technology of WiMAX (which operates similar to WiFi but at higher speeds, over greater distances, and for a greater number of users), the suburban and rural blackout areas could be potentially erased. Schools that tap into this technology could give not only their students, but all residents of their community access and narrow the "digital divide" between the "haves" and "have-nots".</p>
<p>Twitter lets users communicate with text-message-like "micro" posts via cell phone, instant messaging or the web. Many of its popular, regular posters have thousands of followers.</p> <p>Source: #4888, <i>USA Today</i>, 11/19/08</p>	<p>Twitter is the newest social networking phenomenon that the College may need to review for its potential.</p>
<p>Three out of four U.S. bloggers are college graduates, 42 percent have attended graduate school and more than half have a household income \$75,000 or more. Bloggers skew toward males, singles, and self-employed. While 50% of internet users in the U.S. are male, 57% of bloggers are male. Most bloggers write about multiple topics, with personal and professional issues being equally popular. The top reason for blogging is "speaking my mind on areas of interest." Most bloggers don't hide their identity. Among professional and corporate bloggers, the most frequently cited benefit is becoming better known in their industry. A small minority reported negative results. Nine percent of bloggers said as a result they weren't as focused at work. The majority of bloggers don't make money from their blogs and 4% say that they consider their blog to be their full-time job. For those who reach lots of people, 100,000 or more unique visitors per month, the average annual revenue is more than \$75,000.</p> <p>Source: #4909, <i>Technology Today</i>, 11/3/08</p>	<p>Properly researched and implemented blogs could serve as a wonderful marketing, recruitment, and market research tool for the College. Per experts, time is the largest investment and most companies hire writers, probably with a profile shown here.</p>
<p>Microsoft's chief research and strategy officer has set out to transform mundane laptops and desktop PCs into prescient tools responsive to eye, voice and touch commands. In five to 10 years PCs will evolve into intuitive personal assistants that pay close heed to your quirks, and even anticipate your needs. We're going to start to see the computer move to be less of a tool and more of a partner to you.</p> <p>A chip called the "graphics processing unit," or GPU, has opened new horizons. Because of its architecture, a single GPU can process as much data as 800 CPUs for certain tasks. Developers have begun to apply some of that capacity to task other than rendering graphics. GPUs are being used to speed up the format changes required when you transfer video from your camcorder to your PC editing program, for instance. One project generates an avatar on a PC screen who makes eye contact and converses with anyone who approaches it. This "digital personal assistant" can memorize your posture and clothing, while taking messages, asking trivia questions and scheduling rides. But with more powerful PCs, it could analyze your personal habits and manage your e-mail.</p> <p>Source: #4956, <i>USA Today</i>, 3/4/09</p>	<p>To really take advantage of this new technology, experts say a major change in software has to happen, and Microsoft has a key role to play in this equation. Costs will be high initially but the potential can be both exciting and scary (if a computer can be your digital personal assistant that analyzes your every move).</p>

Trend/Event	Implication
ECOLOGY/RESOURCES SECTOR	
<p>There are three big trends to watch out for: sustainability labels, virtual meetings, and zero waste. A sustainability label provides information about sustainability to consumers so they can make informed choices. The labels will break down into a few categories, a carbon footprint, index measuring recycled content, and food miles traveled.</p> <p>Source: #4944, <i>fastcompany.com</i>, 12/05/08</p>	<p>These trends will result in more video conferencing of meetings and even expos/conferences say experts. The future consists of webinars instead of seminars.</p>
<p>Could wind power be the next big wave?</p> <ul style="list-style-type: none"> • Wind power accounted for nearly 30% of all new electricity generating capacity added nationally in 2007, up from less than 1% just five years ago, in 2002. • Wind industry manufacturing facilities surged from a very small base in the U.S. in 2005 to 100 in 2007. Many existing facilities are expanding. In 2007, new tower, blade, turbine and assembly plants opened in Illinois, Iowa, South Dakota, Texas, and Wisconsin. In the same year, seven other facilities were announced in Arkansas, Colorado, Iowa, North Carolina, New York, and Oklahoma. Altogether, the new and announced facilities are expected to create some 6,000 jobs. <p>Source: #4793, <i>Wind Power Outlook 2008</i>; #4794, <i>Wind Power Outlook 2008</i></p>	<p>The use of these “cleaner” and “greener” forms of energy can help with the rising energy demand and costs. As indicated in the Economic/Workplace sector on page 14, the demand for industrial machinery mechanics and electricians is on the rise due these trends. Someone has to install solar panels, geothermal power, wind turbines and then know how to repair these new energy sources.</p>
<p>U.S. solar capacity has increased 35% to 55% annually the past few years, largely as a result of generous state and federal tax incentives.</p> <p>Total capacity: 2003, 45.3 2008, 293.1</p> <p>Total number of installations: 2003, 4,608 2008, 18,754</p> <p>Source: #4984, <i>USA Today</i>, 4/22/09</p>	<p>Moraine Park already offers programs for many of the “green” jobs, however there are even more opportunities to investigate and research new programs and training options along with integrating more “green” concepts within current curriculum.</p>
<p>Geothermal power, which generates electricity by tapping a virtually limitless reserve of the Earth's natural heat, is perhaps the most promising renewable energy. Geothermal makes up 3% of the nation's renewable energy. Geothermal, unlike wind and solar, makes power around the clock. Developers typically drill for water that's at least 350 degrees Fahrenheit. Pumped from the ground, the hot water turns to steam, which cranks a turbine. A relatively new binary process uses cooler water -250 to 300 degrees- to heat a refrigerant that vaporizes at lower temperatures.</p> <p>Source: #4907, <i>USA Today</i>, 12/16/08</p>	

ECOLOGY/RESOURCES SECTOR

Businesses are wasting billions of dollars by leaving their PCs on at night. U.S. organizations squander \$2.8 billion a year to power unused machines, emitting about 20 million tons of carbon dioxide-roughly the equivalent of 4 million cars. About half of 108 million office PCs in the USA are not properly shut down at night. Wastefulness does not just affect a company's bottom line, it creates environmental concerns. If the world's 1 billion PCs were powered down just one night, it would save enough energy to light the Empire State Building for over 30 years. Companies insist PCs remain on at night so they can be patched with software updates. Simply shutting down PCs at night can save a company with 10,000 PCs over \$260,000 a year and 1,871 tons of carbon dioxide emissions.

Source: #4962, *USA Today*, 3/25/09

Wisconsin's residential property taxpayers contributed just under 51% of total property taxes in 1970. By 2007, residential property accounted for 71% of all property tax collections; largely due to decreases in the share contributed by manufacturing and agricultural property.

Source: #4825, *Executive Summary*, 09/16/08

It is amazing how much money it costs to keep PCs on at night and how much it is polluting our air. Moraine Park's policy of shutting off our PCs when leaving for the day is both a good economical and ecological decision.

As residential property tax burdens have increased over the years, it has become more difficult to pass school referendums and for residents to accept increases in technical college school tax levies.