

Campus Implications

Workshop #3: IU South Bend Strategic Planning

Friday, April 24, 2009 from 2:30 pm – 5:00 am

Office of Institutional Research

COMPETITION TRENDS

Competition 1: Partnerships with Feeder Schools

As higher education institutions recognize the significant role they play in the quality of our nation's middle and secondary schools, efforts are increasing to build sustaining and mutually reinforcing partnerships with feeder schools.

Implications for the campus:

1. Better prepared students
2. Marketing advertisement

Competition 2: Ivy Tech Transfers

Competition among 4-year schools for Ivy Tech transfers continues to grow, and partnerships with Ivy Tech to improve student persistence and increase transfer rates to 4-year schools has become an important element in higher education strategic planning.

Implications for the campus:

1. Need to be attractive to I.T. grad programs, affordability
2. I.T. student services not as strong counseling, judicial
3. Competition with other local universities, but may also get students from IU, BSU, (new admission standards)

Competition 3: Innovative Partnerships to Remain Competitive

Innovative partnerships (which include early college programs, new technology, and online course options) are being developed among high schools, post-secondary schools, higher education and technology industries , and local communities.

Implications for the campus:

1. Assist in meeting 'Reaching Higher' goals – 4 year completion
2. Potential 'dangers' with too many online credits
3. Healthcare partnerships vital
4. Middle and high school crucial

Competition 4: Affordability of Higher Education

Colleges and universities are facing major issues related to the financing system and managing affordability. Many are attempting to respond to these issues and remove financial obstacles, especially those related to individuals from low-income backgrounds.

Implications for the campus:

1. We win! – If state aid continues
2. Middle class needs innovative assistance
3. Scholarships
4. Foundations
5. GI Bill

Competition 5: Partnerships with Private Sector

Partnerships between post-secondary schools and the business sector are increasing, as schools seek new funding resources to assist students with their educational pursuits.

Implications for the campus:

1. Depends on economy
2. Increase departmental collaborative efforts (CTS-Business-Health Sciences)
3. Funding
4. Scholarships
5. Assess private sector

Competition 6: Keeping Students' Attention

In future efforts to compete for student attention and enrollment, colleges will emphasize communication mechanisms that center on technology, including but not limited to: web, email, cell phones, blogs, etc. that students value and use.

Implications for the campus:

1. Bring more research into classroom
2. Make technology part of research/course.
3. Change title to “teach students to reflect and focus” – not “need” technology
4. Health implications – too much stimulation (drinks, technology)
5. Exercise, nutrition

Competition 7: Financial Literacy

Financial literacy programs are on the rise, as colleges are increasingly accepting responsibility for helping students understand personal finance and money management.

Implications for the campus:

No implications

Competition 8: Accelerated Degree Programs

Accelerated degree programs are offered by colleges to compete for and enroll non-traditional students, and these will increase as the number of adult learners grows.

Implications for the campus:

No implications

Competition 9: International Students

There is growing competition to attract international students, from universities across the globe.

Implications for the campus:

No implications

Competition 10: Feeder Countries for International Students

Four countries are expected to generate almost two-thirds of the demand for higher education by 2025: China (21%), Malaysia (15%), India (14%) and Indonesia (11%).

Implications for the campus:

No implications

Competition 11: Law Governing International Students in U.S.

The increase in laws that work against international students once they have graduated will stiffen competition within the United States for international students and disadvantage mid-size institutions like IU South Bend that attract a small, but significant, international student population.

Implications for the campus:

No implications

Competition 12: Recruiting Quality Faculty and Staff

Creative ways of recruiting and retaining faculty and administrators are being used, including benefits packages, housing, and support for further education.

Implications for the campus:

No implications

Demographics

Demographic 1: Indiana High School Graduates

Between 2008-09 and 2014-15 the projected annual number of high school graduates in the Midwest will decline by about 6.4 to 8.0 percent, while Indiana will see a loss of only 1.2 to 2.8 percent over that five year time period. Two local school districts, South Bend (about a 10 percent decline) and Penn-Harris-Madison, both expect declines in K-12 enrollments through 2013.

Implications for Campus:

1. Competition will increase (with other Universities)
2. IUSB needs to be more aggressive with marketing to maintain enrollment (marketing becomes more important)
3. Our enrollment might decline due to smaller pool/increased competition
4. IUSB might develop closer relationships with area high schools – those relationships will become more important
5. Develop more adult programs (non-traditional students)
6. Develop more grad programs

Demographic 2: Michigan and Ohio High School Graduates

There is a projected decline of between five and ten percent in high school graduates in both Michigan and Ohio between 2009-10 and 2015-16.

Implications for Campus:

1. Competition will increase (with other universities)
2. Other states become more competitive for IN students
3. Need to become more competitive with our out of state tuition
4. May need response to retain IN students

Demographic 3: Changing Generational Values

Traditionally aged students entering college within the next 3-5 years will enter with a sense of entitlement to high grades and personal attention that they receive from the rest of our consumer driven society, which has been a continuing shift in generational norms towards what is a more “narcissistic” view of their place in the larger world.

Implications for Campus:

1. Our students expectations have changed; we may need to adapt instructional methods to match
2. Paradigm shift from “sense of entitlement”
3. Increase in students’ frustration level with us (decrease [possible] in retention)
4. Parents - have higher expectations and demands (academics, security, etc.)

Demographic 4: Racial/Ethnic Diversity in Indiana

Indiana expects to see an increase in racial/ethnic diversity. Racial underrepresented groups in Indiana are projected to grow from 11.6 percent of Indiana’s population in 2005 to 14.4 percent of the population in 2030. Hispanic ethnicities are expected to grow from 4.5 percent of Indiana’s population to 8.1 percent of the population by 2030.

Implications for Campus:

1. Increased need for marketing ourselves to minorities
2. Increased needs to finance education for undocumented students
3. Increase need for retention efforts regarding minority students
4. Retention efforts become more challenging

Demographic 5: Income Disparities and Higher Education

Income disparities increasingly are being recognized as the most significant barrier to access and graduation for all students, although they clearly hit minority students the hardest.

Implications for Campus:

1. More criticism of the Higher Ed function due to finding ways to pay for it
2. Criticism may lead to action being taken, caps to tuition, student eligibility criteria
3. More service-learning opportunities
4. More difficult (moneywise) for local students to go to Bloomington, other large campuses
5. May need to RAPIDLY add capacity
6. Increased need for local scholarship opportunities

Demographic 6: Baby Boomers and College

The aging Baby Boomer generation will begin to reenter college creating large increases in non-traditional students on campus.

Implications for Campus:

1. Increased need for variety of delivery methods
2. Need to provide for mid-career changes
3. Enrichment/non-degree/continuing education options

Demographic 7: Latino Population Growth

With the annual number of Latino high school graduates in Indiana projected to grow from 2,801 students in 2008-09 to 5,247 students in 2014-15, an 87 percent increase, and 18 percent growth rate in the overall Latino population in Indiana through 2015, Latino college enrollments can be expected to grow at a rapid pace over the next 5 years.

Implications for Campus:

1. Increased need for marketing ourselves to minorities
2. Increased needs to finance education for undocumented students
3. Increase need for retention efforts regarding minority students
4. Retention efforts become more challenging

Demographic 8: Census Projections for North Central Indiana

The population of St. Joseph County and the surrounding 5 Indiana counties is expected to increase by about 2.1 percent between 2005 and 2015, which will put the area's population at 732,784 people.

Implications for Campus:

1. Competition will increase (with other Universities)
2. IUSB needs to be more aggressive with marketing to maintain enrollment (marketing becomes more important)
3. Our enrollment might decline due to smaller pool/increased competition
4. IUSB might develop closer relationships with area high schools – those relationships will become more important
5. Develop more adult programs (non-traditional students)
6. Develop more grad programs

Demographic 9: Census Projections for Indiana

Indiana's population will continue to grow (about 12 percent to 6.8 million) at an increasingly slower rate through 2030, but it should see increases in population slightly larger than much of the Midwest.

Implications for Campus:

1. Competition will increase (with other Universities)
2. IUSB needs to be more aggressive with marketing to maintain enrollment (marketing becomes more important)
3. Our enrollment might decline due to smaller pool/increased competition
4. IUSB might develop closer relationships with area high schools – those relationships will become more important
5. Develop more adult programs (non-traditional students)
6. Develop more grad programs

Demographic 10: Shift in Age Distribution in Indiana

While Indiana's under 18 year old population will remain about 25 percent of the total state's population through 2030, the over 65 year old population is expected to grow from about 12.4 percent of the population to 18.1 percent of the population (below the national average of 19.7 percent by 2030).

Implications for Campus:

1. Competition will increase (with other Universities)
2. IUSB needs to be more aggressive with marketing to maintain enrollment (marketing becomes more important)
3. Our enrollment might decline due to smaller pool/increased competition
4. IUSB might develop closer relationships with area high schools – those relationships will become more important
5. Develop more adult programs (non-traditional students)
6. Develop more grad programs

Economics

Economic 1: Nanotechnology at University of Notre Dame

The Michiana region will experience considerable economic and job growth from the development of nanotechnology research and industry centered at the University of Notre Dame.

Implications for Campus:

1. Spouses of workers who relocate – potential students and faculty
2. Reshape IUSB programs and curriculum - review programs and identify opportunities
3. Opportunities for internships, field experience, etc.
4. Strengthen relationship with Notre Dame

Economic 2: Changeover in Manufacturing Sector

While traditional manufacturing sectors in the region will continue to decline in the midst of negative pressures at the national and international levels, there are opportunities for manufacturing growth by shifting to niche markets and new technologies.

Implications for Campus:

1. Increased collaboration with Ivy Tech
2. Educate future technology instructors
3. Expand programs to accommodate emerging technologies in manufacturing
4. Grant / Federal Funding opportunities

Economic 3: Metronet and a New Type of Infrastructure

Regional infrastructure will continue to expand, and will do so beyond the traditional roads and buildings to include high-speed data networks, creating new and better opportunities for economic development.

Implications for Campus:

1. Tele-commuting and virtual work ethics
2. Distance on-line education
3. Research collaboration
4. Informatics, Computer Science, and General Education programs

Economic 4: Michiana's Shrinking Economy

The economic base of the Michiana region is shrinking as evidenced by recent declines in production and employment, and this downward trend is likely to continue for the foreseeable future.

Implications for Campus:

1. Degrees – no jobs
2. Challenges for Career Services
3. Out-migrating students
4. Transformation of labor force to benefit long-term

Economic 5: Income in Michiana

The levels of income and earnings in the Michiana region are expected to grow slowly.

Implications for Campus:

1. Slow income growth
2. Student's ability to pay for college
3. Challenges for Financial aid, Career Services, Scholarships
4. Creative financing
5. Lower inflation

Economic 6: Regional Income Inequity and Poverty

Income inequality will increase and poverty will likely become a problem in the Michiana region, at least in the short term.

Implications for Campus:

1. Increase in poverty
2. Increase need in professions that "help" people (i.e. social services, counseling, etc.)
3. Increase need in criminal justice professions
4. Preparation of students and access to higher education
5. Community partnerships and collaboration with community service providers to determine needed professionals
6. Increased faculty involvement in community services

Economic 7: Biofuels in Indiana

Indiana is emerging as a leader for the manufacture of biofuels, which will impact the environment, economy, and quality of life of Hoosiers.

Implications for Campus:

1. Research and internship opportunities and related funding

Economic 8: Expanding Healthcare Sector

The healthcare sector is a key component of the local and regional economy and is expected to see considerable growth.

Implications for Campus:

1. Expanding healthcare sector
2. Review existing curriculum
3. Dialogue with area healthcare industry to determine actual needs
4. Develop Healthcare Management Program and guidelines

Economic 9: Indiana's Life Science Initiatives

Indiana is positioning itself to become a leader in the Life Sciences by seeking opportunities and targeting efforts to grow the state's bio and life-sciences industries in the next 3 – 5 years, which will impact the economy, health and quality of life for Hoosiers.

Implications for Campus:

1. Increase IUSB's presence in Life Sciences
2. Develop Life Sciences initiatives at IUSB
3. Develop medical ethics curriculum
4. Research and internship opportunities
5. Increase partnership with Notre Dame

Economic 10: Indiana's Global Market Position

Indiana's economy is becoming increasingly linked to the world economy, particularly in markets such as pharmaceuticals and auto/vehicular parts.

Implications for Campus:

1. Global market position
2. Supporting international studies and business
3. Foreign language and cultural studies
4. Recruit international students
5. Entrepreneurship curriculum review
6. Decrease importing related to current policies

Economic 11: Local Export Activity

Local export activity is on the rise and should continue to expand, although the magnitude of that growth will be influenced by national and international trends in the economic condition of sectors with high export activity.

Implications for Campus:

1. Global market position
2. Supporting international studies and business
3. Foreign language and cultural studies
4. Recruit international students
5. Entrepreneurship curriculum review
6. Decrease importing related to current policies

Economic 12: Unpredictability of Current Economic Downturn

The U.S. economy is in an unprecedented state, marked by uncertainty and turmoil, and downward spiraling, particularly in the real estate and stock markets.

Implications for Campus:

1. Difficulty of long-term planning

Economic 13: Real Estate and the Retired

The fragile real estate and stock market outlooks will affect the economic future for all Americans, but particularly the retirement-aged segment of the population.

Implications for Campus:

1. Educational needs of this sector

Education

Education 1: Competition with For-Profit Institutions

Increasing competition for students will continue in the future as for-profit higher education institutions, campus and four-year colleges, and countless providers of postsecondary education institutions (e.g. vocational training providers, online providers, etc...) target, recruit, and enroll students.

Implications for Campus:

1. Price is important
2. Quality is equally important
3. Knowing competition important
4. Customer responsiveness important
 - a. Night classes, online
 - b. Degree completion
 - c. Marketing

Education 2: State Financial Support for Higher Education

State financial support for public higher education has been decreasing and will continue to do so in the future.

Implications for Campus:

1. Completion/graduation rates important
2. Student recruitment important
 - a. Quality and quantity of admissions both critical
3. Creative funding important

Education 3: Accountability in Higher Education

Publicly-funded colleges and universities will be subject to increasing demands for accountability in a number of areas such as degree completion, retention, costs and spending, programs of study, learning outcomes and overall institutional transparency.

Implications for Campus:

1. Must respond to this
2. K-12 collaboration needed to address K-12 part of this problem

Education 4: Privatization of Services

There is increasing consideration being given to outsourcing or privatization of higher education services.

Implications for Campus:

No implications

Education 5: Adjunct Faculty

There is an increasing reliance on contingent faculty in higher education.

Implications for Campus:

1. Adjuncts need to be better mentored/integrated in campus community
2. Balance adjunct flexibility with quality and campus connection with tenure track faculty

Education 6: Technology in the Classroom

Technology will continue to impact the way that higher education is delivered and challenge traditional campus and classroom based access and delivery of programs of study.

Implications for Campus:

1. *Maintain edge, keep up with changes...
2. *Keep up with students
3. *financial (cost) implications

Education 7: High School Completion Rates

The U.S. Department of Education reported in 2006 that high school status completion rates for 18-24 year olds have trended upwards for all race/ethnicity groups since 1980, and as of 2006 the rate was 96% for Asians/Pacific Islanders, 93% for whites, 85% for African-Americans, 71% for Hispanics, and 90% for multiracial individuals. *(Note: This rate includes those completing the GED exam.)*

Implications for Campus:

Unclear

Education 8: Math and Science

The U. S. is lagging behind internationally in math and science education.

Implications for Campus:

1. Must emphasize
2. K-12 collaboration

Education 9: American Students Abroad

Increasingly American students are choosing to study abroad.

Implications for Campus:

1. Minimal impact

Education 10: College Remediation

There is an increase in the number of entering college students needing remediation.

Implications for Campus:

1. Community college collaboration...
2. ...Otherwise, poor use of our resources

Labor Force

Labor Force 1: Advanced manufacturing

The need for advanced manufacturing skills will increase through 2021.

Implications for Campus:

1. Advanced manufacturing skills collaboration with Ivy Tech, high schools, etc.
2. Opportunities for Extended Learning/Continuing Education
3. Inter-disciplinary education for advanced skills
4. Investigate feasibility of new programs

Labor Force 2: Business Occupations

According to Indiana Economic Growth Region 2 projections, business occupations will increase 11% between 2004 and 2014.

Implications for Campus:

1. Study program implications using latest data to determine future growth in professions most-relevant to region

Labor Force 3: Local Government

City and county government services in our region will contract over the next 3-5 years.

Implications for Campus:

1. Public-private partnerships
2. Involvement partnerships with businesses and larger community

Labor Force 4: Healthcare

Healthcare related occupations in Indiana Economic Region 2 are projected to increase by over 20% from 2004-2014.

Implications for Campus:

1. Expanding healthcare sector
2. Review existing curriculum
3. Dialogue with area healthcare industry to determine actual needs
4. Develop Healthcare Management Program and guidelines

Labor Force 5: Healthcare Managers

The need for managers in the healthcare industry is increasing with a projected increase of 2,040 jobs between 2002 and 2012 for IEGR 2.

Implications for Campus:

1. Expanding healthcare sector
2. Review existing curriculum
3. Dialogue with area healthcare industry to determine actual needs
4. Develop Healthcare Management Program and guidelines

Labor Force 6: Expectations for Growth

Employment projections for Indiana Economic Region 2 predict a 21% increase in healthcare occupations by 2014, a 4% increase in retail occupations and a 6% increase in manufacturing occupations.

Implications for Campus:

1. Communication/dialogue with various industries to match students' skills with industry standards/needs
2. Problem-based learning

Labor Force 7: Turnover of Labor Force

Over the next 35 years, the number of Hoosiers age 65 and older will increase by 90 percent. That means that in 2040, one in five Hoosiers will be of traditional retirement age. Meanwhile, the number of people in the 25-54 age group - a key labor force demographic - will decline.

Implications for Campus:

1. Retirees as students
2. Retirees as potential adjunct faculty
3. Partnership with mentoring/volunteering opportunities

Labor Force 8: Transportation Sector and Retraining

Major job losses in the RV and transportation sector in our economic growth region will increase the need for retraining of workers.

Implications for Campus:

1. Increased collaboration with Ivy Tech
2. Educate future technology instructors
3. Expand programs to accommodate emerging technologies in manufacturing
4. Grant / Federal Funding opportunities

Labor Force 9: Teachers

Growth in jobs for elementary and secondary teacher will increase 20% in next seven years (2015) and 32% for postsecondary teachers.

Implications for Campus:

1. More student teachers
2. Career support for teachers leaving field due to burn-out
3. Increasing competition to attract new student teachers
4. Increasing competition to attract faculty

Labor Force 10: Skill Level of Workforce

Over the next 25 years or so, as better-educated individuals leave the workforce they will be replaced by those who, on average, have lower levels of education and skill.

Implications for Campus:

1. Partner with local k-12 to increase competency in language, math, science, writing
2. Re-evaluate IUSB's admission standards
3. Extended Learning / Continuing Education opportunities
4. Market entrepreneurship program

POLITICAL TRENDS

Political 1: Accountability in Higher Education

There is increasing attention at the Federal and State levels to and insistence upon accountability in postsecondary education and this trend will continue for the next 3-5 years.

Implications for the campus:

1. Increased demand
2. Perception of quality will increase enrollment

Political 2: Affordability of Higher Education

Tuition costs are outpacing government funding for postsecondary student aid. This will have the greatest impact on low-income students and leave many of them unable to afford college during the next 3-5 years.

Implications for the campus:

1. Must address (identify) sources of cost increases
2. Potential drop in demand

Political 3: Pell Grants

The Pell Grant Equity Act may further increase the number of students opting to attend 2-year colleges and may help fuel the movement of 2-year community colleges offering 4-year degrees.

Implications for the campus:

1. Increased demand

Political 4: Consolidating School Systems

There are increasing recommendations to consolidate school systems and related public services in Indiana.

Implications for the campus:

1. Easier recruitment

Political 5: Green Alliances

Labor unions, environmental groups, and other social-economic justice groups are combining forces to lobby for creation of green jobs. (Blue-Green Alliance, UAW; Sierra Club, Michiana Social Forum, Green Party)

Implications for the campus:

1. Potential need for “green” areas of study

Political 6: Privatization

In the country as well as in Indiana, there is increasing privatization of public entities, infrastructure and services.

Implications for the campus:

No implications

Political 7: Creative Funding for Education

There is growing interest in seeking “creative” funding to make a college education more accessible and affordable for Indiana residents.

Implications for the campus:

1. YES!!

Political 8: ICHE’s Reaching Higher Plan

The Indiana Commission on Higher Education (ICHE) will implement new strategic policies outlined in the “Reaching Higher” document by 2012, and will incentivize institutions with formula funding based on numerous output metrics, including degree completions and completion rates.

Implications for the campus:

1. Pay attention to retention

Political 9: Community Organizations

There is an emergence of community-based organizations that have the potential to impact policy.

Implications for the campus:

1. Potential need for community organization, nonprofit management areas of study

Political 10: Property Tax

With the changed property tax assessment indicator, it is likely that county and local governments will loss significant revenues due to property tax caps.

Implications for the campus

1. Little direct implication

Social, Values and Lifestyle

Social, values, and lifestyle 1: Sustainability

The shift to valuing and practicing environmental sustainability and improving the environment for the future will continue to grow and become even stronger over the next 3-5 years.

Implications for Campus:

1. Programs currently in place
2. Possibly bring sustainability/moral implications into classroom

Social, values, and lifestyle 2: Social Networking

The explosive growth and applications of new forms of social interaction that are virtual or e-based social networking will continue over the next 3-5 years.

Implications for Campus:

1. New implications
 - a. Threats that we must be prepared to meet
 - b. Lack of privacy
 - c. Blurring of boundaries
2. Blurring of line between classroom/virtual world

Social, values, and lifestyle 3: Relocalization

There is a growing movement towards relocalization that will continue over the next 3-5 years.

Implications for Campus:

1. Support local business when making purchases

Social, values, and lifestyle 4: Tailored Consumerism

People are turning away from mass-produced products and services in order to gain products, experiences, and services that have been specially tailored to fit their own unique needs, including things they themselves have produced for themselves.

Implications for Campus:

1. Better meets needs
2. Tailored educational programs
 - a. Interdisciplinary
 - b. Degree that fits “me”
3. Would in turn meet community needs

Social, values, and lifestyle 5: Digital Technology and Learning

Rapid innovations in digital technology are creating new opportunities for novel application of those technologies to learning and lives.

Implications for Campus:

1. Lack of socialization
2. Good for supplemental instruction
3. Kindles – textbook orders

Social, values, and lifestyle 6: Redefining Diversity

While diversity still refers to differences in gender, race or social class, it is increasingly understood and applied to other identities and affinity groups; communities using these new definitions of diversity are forming across the more traditional lines of gender, race or social class.

Implications for Campus:

1. Increase in students with disabilities – 20% increase each year
2. More need for acceptance
3. Increase polarization (social)
4. People feeling marginalized
5. Student life needs increase

Social, values, and lifestyle 7: Health and Wellness

In the next 3-5 years there will be a change of focus from health care to health management with a greater emphasis on health and wellness and prevention among providers and individuals accompanied by an increased personalization and diversity in health and wellness strategies.

Implications for Campus:

1. Trends moving to being a “caring campus”
2. Already a “Tobacco Free” campus
3. Allowable time for workouts for faculty and staff
4. Targeted Health Promotion Incentives

Social, values, and lifestyle 8: Spirituality

Religious and spiritual diversity, including atheism and agnosticism, will continue to grow and become more visible over the next 3-5 years.

Implications for Campus:

1. Students challenging or resisting intellectualism, science

Social, values, and lifestyle 9: Aging Population

The increase in the proportion of the population aged 65 or older will have dramatic consequences for public health, the health-care financing and delivery systems, informal care giving, and pension systems.

Implications for Campus:

No Implications

Social, values, and lifestyle 10: Redefining Retirement

Baby boomers remain consumers of education as they age and are redefining what it means to grow old.

Implications for Campus:

No Implications

Social, values, and lifestyle 11: Marriage and Family

As life expectancy increases, people will have more options for how they fit marriage and family into their lives, such that the possible permutations will be too complex for easy demographic profiling.

Implications for Campus:

No Implications

Technology

Technology 1: Cybercrime

Computer networks and the users of those networks will be increasingly targeted by cyber-criminals and others bent on wrecking havoc.

Implications for Campus:

1. Increased need for internal security
2. Increased need to educate our faculty/staff
3. Increased “push-back” from our faculty/staff

Technology 2: Classroom Technology

Faculty and students will increase use of web-based applications and mobile technologies for classroom instruction and learning.

Implications for Campus:

1. Changing use of facilities
2. Fewer students sitting in classrooms
3. Infrastructure changes needed
4. Increased demand on educational design
5. Classroom management training needed for faculty (due to disruptions)

Technology 3: Laptop Initiatives

The use of 1-to-1 laptop initiatives continues to increase across the nation.

Implications for Campus:

1. Decreased need for computer labs (can spend more money on infrastructure)
2. Laptops may save university and students money
3. Decreasing need for textbooks
4. Professor less likely to remain center of attention with all students having a laptop – change needed in teaching methods
5. Paradigm shift: economic, teaching, cultural, market advantage

Technology 4: Virtual Environments

Use of technologies such as distance learning, telecommuting and videoconferencing will likely increase in the next 3-5 years.

Implications for Campus:

1. New marketing tools (MySpace, Face Book, Twitter...)
2. More advanced thought needed to stay ahead of trend
3. Enhanced tool to simulate reality and enhance problem-solving and enhance educational relevance
4. Enhanced ability to assess student learning
5. Better retention of information s (students) (e.g. "Prof-cast")

Technology 5: Open Source Computing

Faced with increasing software, hardware and infrastructure costs, organizations will find and utilize alternatives such as open-source applications and "cloud computing."

Implications for Campus:

1. Eliminate need to purchase large computing licenses
2. Increase ability to collect information
3. Potential significant cost savings
4. Greater control over customizing systems

Technology 6: Distance Education

The demand for courses and degree programs offered through distance education or online instruction will increase as will the ability to deliver the content with emerging technologies.

Implications for Campus:

1. Need for increasing variety of delivery methods
2. Loss of some traditional students
3. Distance potentially increases access to higher education

Technology 7: Demand for High Tech Workers

Employment opportunities in manufacturing continue to decrease while jobs requiring high tech skills/education go unfilled particularly in nanotechnology/nanoscience.

Implications for Campus:

1. Increased need for opportunity to work from home (faculty)
2. We are not producing enough of what the market needs
3. Increased need for new programs and degrees
4. Need (increase) for 4-year degrees and grad degrees
5. Informatics need increasing
6. WE need to understand – need a local expert