

IU Northwest Environmental Scan 2011

Survey Summary and Trend Statements

Office of Institutional Effectiveness and Research

ABSTRACT

The environmental scan document takes a look at ninety-four trend statements and comments from five major sources across nine broad change areas. The report features prominently the community survey of Northwest Indiana stakeholders, and thirty-two trend statements from faculty, staff, and administrators at IU Northwest.

Table of Contents

| | |
|--|-------------------------------------|
| Introduction | v |
| Acknowledgements | v |
| How to Read this Report | vi |
| Community Stakeholder Survey Summary | 7 |
| Competition | Error! Bookmark not defined. |
| Competition 0 (IUN): Diversity Management | 9 |
| Competition 02 (IUSB): Partnerships with Feeder Schools | 9 |
| Competition 0 (IUSB): Ivy Tech Transfers | 10 |
| Competition 0 (IUSB): Innovative Partnerships to Remain Competitive | 10 |
| Competition 05 (IUSB): Affordability of Higher Education | 10 |
| Competition 0 (IUSB): Partnerships with Private Sector | 10 |
| Competition 0 (IUSB): Keeping Students Attention | 11 |
| Competition 08 (IUSB): Financial Literacy | 11 |
| Competition 0 (IUSB): Accelerated Degree Programs | 11 |
| Demographic | 12 |
| Demographic 01 (IUN): Strength of the Workforce | 12 |
| Demographic 02 (IUN): Geographic Shifts Locally | 12 |
| Demographic 03 (IUN): Census Race/Ethnicity Trends | 13 |
| Demographic 04 (IUN): Indiana High School Graduates | 13 |
| Demographic 05 (IUN): Changing Generational Values | 13 |
| Demographic 06 (IUN): Racial/Ethnic Diversity in Indiana | 14 |
| Demographic 07 (IUN): Income Disparities and Higher Education | 14 |
| Demographic 08 (IUSB): Baby Boomers and College | 15 |
| Demographic 09 (IUN): Latino Population Growth | 15 |
| Demographic 10 (IUN): Census Projections for Indiana | 15 |
| Demographic 11 (IUN): Age Distribution Shift in Indiana | 15 |
| Demographic 12 (SCUP): Promise of College Degree | 16 |
| Economic | 16 |
| Economic 01 (IUN): Sustainable Industries | 16 |
| Economic 02 (IUN): Degree Production | 17 |
| Economic 03 (IUN): BP Whiting Refinery Expansion | 17 |
| Economic 04 (IUSB): Biofuels in Indiana | 17 |
| Economic 05 (IUSB): Indiana’s Life Sciences Initiatives | 18 |
| Economic 06 (IUSB): Indiana’s Global Market Position | 18 |
| Economic 07 (WFS): Econophysicists | 19 |
| Economic 08 (SCUP): Economic Recovery | 19 |
| Economic 09 (SCUP): State and Federal Funding | 19 |
| Economic 10 (SCUP): Renewable Energy Resources | 20 |
| Education | 20 |
| Education 01 (IUN): Nursing Faculty | 20 |
| Education 02 (IUN): Online Courses | 21 |

| | |
|--|-----------|
| Education 03 (IUSB): Competition with For Profit Institutions..... | 21 |
| Education 04 (IUSB): State Financial Support for Higher Education | 21 |
| Education 05 (IUSB): Accountability in Higher Education | 21 |
| Education 06 (IUSB): Privatization of Services | 22 |
| Education 07 (IUSB): Adjunct Faculty | 22 |
| Education 08 (IUSB): Technology in the Classroom | 22 |
| Education 09 (IUN): High School Completion Rates | 22 |
| Education 10 (IUSB): Math and Science..... | 23 |
| Education 11 (IUSB): College Remediation | 23 |
| Education 12 (SCUP): Student Success..... | 23 |
| Education 13 (SCUP): International Students..... | 23 |
| Education 14 (WFS): Class time?..... | 24 |
| Education 15 (WFS): Terminal Degrees | 24 |
| Education 16 (SCUP): Delivery of Education..... | 24 |
| Education 17 (SCUP): Reauthorization of ESEA | 25 |
| Health and Wellness | 25 |
| Health and Wellness 01 (IUN): Health Education Growth..... | 25 |
| Health and Wellness 02 (IUN): Uninsured..... | 25 |
| Health and Wellness 03 (IUSB): Shift to Health Management..... | 26 |
| Health and Wellness 04 (IUSB): Aging Population..... | 26 |
| Labor Force | 26 |
| Labor Force 01 (IUN): Delaying Retirement | 27 |
| Labor Force 02 (IUN): Business Jobs..... | 27 |
| Labor Force 03 (IUN): Healthcare..... | 27 |
| Labor Force 04 (IUN): Teachers | 27 |
| Labor Force 05 (IUN): Degrees in Nursing..... | 27 |
| Labor Force 06 (IUN): Demand for Healthcare Record-Keeping | 28 |
| Labor Force 07 (IUSB): Advanced Manufacturing..... | 28 |
| Labor Force 08 (IUSB): Local Government | 28 |
| Labor Force 09 (IUSB): Turnover in the Labor Force | 28 |
| Labor Force 10 (IUSB): Skill Level of Workforce | 29 |
| Political..... | 29 |
| Political 01 (IUSB): Accountability in Higher Education..... | 29 |
| Political 02 (IUSB): Affordability of Higher Education | 30 |
| Political 03 (IUSB): Pell Grants | 30 |
| Political 04 (IUSB): Consolidation of School Systems | 30 |
| Political 05 (IUSB): Green Alliances..... | 31 |
| Political 06 (IUSB): Privatization | 31 |
| Political 07 (IUSB): Creative Funding for Education | 31 |
| Political 08 (IUSB): ICHE's Reaching Higher Plan..... | 31 |
| Political 09 (IUSB): Community Organizations | 32 |
| Political 10 (SCUP): Support versus Regulation | 32 |
| Science and Technology..... | 32 |
| Science and Technology 01 (IUN): Convergence..... | 33 |
| Science and Technology 02 (IUN): Smartphones..... | 33 |
| Science and Technology 03 (IUN): Twitter | 33 |
| Science and Technology 04 (IUN): Virtual Computer Labs | 33 |
| Science and Technology 05 (IUSB): Cybercrime | 33 |

| | |
|---|-----------|
| Science and Technology 06 (IUSB): Classroom Technology | 33 |
| Science and Technology 07 (IUSB): Laptop (Notepad?) Initiatives | 34 |
| Science and Technology 08 (IUSB): Virtual Environments | 34 |
| Science and Technology 09 (IUSB): Open Source Computing | 34 |
| Science and Technology 10 (IUSB): Distance Education..... | 35 |
| Science and Technology 11 (SCUP): Electronic Readers..... | 35 |
| Society, Lifestyles, and Values | 35 |
| Society, Lifestyles, and Values 01 (IUN) Collective Action | 35 |
| Society, Lifestyles, and Values 02 (IUN): Rejection of Hype | 36 |
| Society, Lifestyles, and Values 03 (IUN): Stress Management and Engagement | 36 |
| Society, Lifestyles, and Values 04 (IUSB): Sustainability | 36 |
| Society, Lifestyles, and Values 05 (IUSB): Social Networking | 37 |
| Society, Lifestyles, and Values 06 (IUSB): Relocalization | 37 |
| Society, Lifestyles, and Values 07 (IUSB): Tailored Consumerism | 37 |
| Society, Lifestyles, and Values 08 (IUSB): Digital Technology and Learning | 37 |
| Society, Lifestyles, and Values 09 (IUSB): Redefining Diversity..... | 38 |
| Society, Lifestyles, and Values 10 (IUSB): Spirituality | 38 |
| Society, Lifestyles, and Values 11 (IUSB): Redefining Retirement | 39 |
| Society, Lifestyles, and Values 12 (IUSB): Marriage and Family..... | 39 |

Introduction

Indiana University Northwest set out to gather information on the external environment this academic year, in order to assist the campus to plan strategically for the next three to five years. The idea was to collect trend statements that had solid rationale and evidence to support them, and then to document those statements in a final report. The trends need a future oriented approach in order for the IU Northwest strategic plan to meet opportunities and challenges in a proactive manner. The future trends do present some uncertainty though; so contradictory individual trends can coexist within the same environmental scan. Gaps might also exist in our information because timeframes and resources might not allow for a completely comprehensive accounting of all trends.

The reliance on staff, faculty, and administrators on campus to submit these trends within their respective areas of expertise is an integral part of the process, and the environmental scan was extended to include a survey of stakeholders in the communities, which has also been summarized in this report. Additional authoritative sources on trends were also consulted, to round out the material. Collection from all these sources allows for some patterns to emerge, and allow for a clearer picture to develop of what the future might hold.

The trends have been categorized into nine broad areas of change and include the following:

| | | |
|---------------|--------------------------|-----------------------------------|
| • Competition | • Demographics | • Economics |
| • Education | • Health and Wellness | • Labor Force |
| • Politics | • Science and Technology | • Society, Lifestyles, and Values |

The source material for the trend statements contained in the IU Northwest Environmental Scan originates from numerous reports, and has dozens of authors. As mentioned before, IU Northwest first surveyed our community stakeholders in the fall of 2010, and the IU Northwest campus community was asked to submit trend statements based on their own areas of expertise over the past three months. We then rounded out our information with excerpts from three other sources: a still-timely scan – edited by John Novak – done two years ago by IU South Bend, trends published by the Society of College and University Planners, and the World Futurists’ Society.

Acknowledgements

I want to first thank the alumni of IU Northwest and other community members of Northwest Indiana who took the time to respond to our Community Stakeholder Survey during the fall of 2010. We received about 150 individual responses to our requests for their thoughts. I want to also thank our campus participant authors who submitted trend statements: Pat Bankston, Carolyn Hartley, Anna Rominger, Ida Gillis, Jo Anne Bowen, Laura Kittle, Linda Delunas, Cynthia O’Dell, the Office of Information Technology, and the Office for Instructional Media. My thanks also to my colleagues at IU South Bend who authored many of the trend statements in the IU South Bend Environmental Scan from 2009. A detailed environmental scan, sources, and contributors from the 2009 scan are found at an IR planning web page (http://www.iusb.edu/~iusboir/Strategic_Planning.shtml).

How to Read this Report

Category Example

Summary

- Condensed bulleted highlights from the area of change.
- At the beginning of each section.

Trend 01 (IUN): An Example

A trend is a statement of the general direction of change, usually gradual, long-term change in the forces shaping the future of an organization, region, nation, or society in general. (Morrison and Held, 1989)

Comments from the stakeholder survey may have corroborated a trend. If it did, it will be indicated here.

The trend author explains why the evidence they've come across supports the trend statement in the rationale. Source material may sometimes be incorporated into the trend or rationale, but additional source material not listed may be provided upon request.

Notation to indicate direct source:

IUN = Indiana University Northwest author

IUSB = Indiana University South Bend author

SCUP = Society of College and University Planners scanning report for fall 2010

WFS = The World Futurists Society

Community Stakeholder Survey Summary

IU Northwest presents a synopsis of the Community Stakeholder Survey that was administered in November and December of 2010. Two letters (or e-mails) from IU Northwest were sent to a list of about 3,000 community members, many of whom are alumni of IU Northwest. There were 144 responses returned to IU Northwest. The following is an overview of those comments.

We asked the question, “What do you believe are the most important trends, or forces of change that will affect Indiana and the Northwest Indiana Region in the next three to five years?” Primary concerns fell into a number of broad categories, and the comments we received from any one individual often spread into numerous thematic areas; therefore, percentages do not add up to 100 percent.

| Theme of all or part of response | Number of respondents mentioning theme | Percentage (%) |
|------------------------------------|--|----------------|
| Economy, Industry, and Jobs | 88 | 61 |
| Education and Job Training/Skills | 61 | 42 |
| Society, Lifestyles, and Values | 38 | 26 |
| Politics, Governance, and Planning | 36 | 25 |
| Demographics | 14 | 10 |

“The job market will force change for many individuals and/or the market that they pursue.”

The economy and jobs theme were most on the minds of our stakeholders from the community, which is not at all surprising. Of the 144 respondents, eighty-eight people (61 percent) made reference to the economy and/or jobs. The need for improved job prospects dominated (over half) the economic comments, which included a need for retraining,

bringing in new small business and new industries to spur job growth, and the prospect of new technologies to revitalize manufacturing.

Education was next on the minds of those who responded. Sixty-one (61) people made comments about how retraining an education remained key trend towards revitalization of Northwest Indiana, and over half of those comments made an explicit link between education and the economy. When people brought up education or higher education, IU Northwest was mentioned eight times. Mention of IU Northwest included reference to developing a teaching hospital partnership for the IU School of Medicine Northwest Center.

Society, lifestyles, and values constitute yet another broad area of trends that bring together quality of life issues in the Northwest Indiana region. Twenty-six (26) percent of the respondents made some reference to these issues. The top three sub-themes include urban decay, racism, and crime. Many times, perhaps because IU Northwest is located there, Gary was mentioned prominently in these comments. Other areas of concern in this category that received mention were the decline in the arts, health care, and environmental quality.

“I fear a hardening of barriers between races, economic levels, and populations of counties in the region.”

“The development of a comprehensive strategic vision for our region and a plan to implement it.”

Politics, governance, and planning are seen as important areas of change as well. This was an area where the City of Gary received some specific mention as well. Of all the respondents, quarter of them mentioned trends involving the politics, governance, and planning in the region. Although the social issues were quite divergent within the sub-themes, political

trends focused on regional governance/leadership, and taxes. Most of the other comments were tangential to those trends, and there was a significant call for unity and cooperation among communities, to allow the regional planning trends to continue and succeed.

Demographic trends rounded out the five broad categories discussed by our community respondents, although only about ten percent of the participants mentioned a demographic shift they see happening over the next three to five years. There was recognition of the fact that Northwest Indiana has an aging workforce, which will eventually have to be replaced. Mobile populations and an increasingly diverse region were also discussed, and are supported by U.S. Census evidence.

“We do not have a trained workforce to replace the retiring baby boomers in the advanced manufacturing businesses.”

The characterization of the community response overall recognizes that Northwest Indiana faces significant challenges that need the attention of everyone living here. Jobs dominated the conversation, but the other unifying theme is the challenge to unite the diverse people and communities of Northwest Indiana, to build a successful future for the region.

Competition

Summary

- Effective management of people, resources, and programs is required to remain competitive for students, and faculty & staff.
- Close partnerships with high schools, community colleges, the private sector, and other constituencies will increase in importance, to compete for students and human talent.
- Affordability of higher education, and finding ways to advise students in financial literacy, increase in importance.

Competition 0 (IUN): Diversity Management

Adequate market share of diverse students and employee talents may be lost to more effective planning and management by competitors.

Comments from the community stakeholder survey corroborated this trend.

Strong institutions benefit from the diversification of its stakeholders, whether they are internal or external. Fresh perspectives and ideas from people with diverse backgrounds presents options that were perhaps unrealized, and breaks organizations out of the status quo that might otherwise persist in a monoculture.

“Diversity management is about building the ability to have strong, trusting relationships with people as they are—organizationally and personally. It’s about getting your organization to strip away the unproductive behaviors that block its ability to build meaningful relationships with internal and external stakeholders. You can’t do that without an honest connection to the people around you both in your community and communities around the world.” Luke Viconti (<http://diversityinc.com/department/105/>)

If organizations fail to plan to grow these relationships, then they will lose a competitive advantage that comes from the resiliency of a diverse organization.

Competition 02 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

The blame game runs throughout the educational system and beyond. Employers blame colleges and universities for inadequately preparing students for the workforce; post-secondary schools blame secondary schools for inadequate college prep; secondary schools blame middle and elementary schools for advancing under-prepared students; and elementary schools blame parents for not providing students with fundamental needs, basic learning skills, and self-discipline. Federal and state administrators have attempted to address this issue with programs such as No Child Left Behind, P-16 legislation, and assessment/accountability requirements for schools. Educators at every level are subject to increasing accountability for student achievement and graduation rates, and schools will begin to address the need for better communication and collaboration across educational levels.

Competition 03 (IUSB): 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.

The growth of Ivy Tech Community College in Indiana has changed the way many colleges and universities market, recruit, and manage their enrollment. The mission of the regional campuses of state institutions, in particular, has changed, as these campuses no longer are responsible for delivering developmental coursework to high school graduates enrolled in college. In short, students who are less academically-prepared for four-year college degree programs are being referred to Ivy Tech at a higher rate than in previous years. Partnerships between 4-year schools and Ivy Tech are critical to ensure that students successfully transition from the two-year to the four-year programs. For example, Purdue North Central has taken an aggressive approach to strengthening their partnership with local Ivy Tech sites. State residential campuses, as well, are more strategic about encouraging and facilitating student transfer from Ivy Tech.

Competition 04 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

Much of the innovation and partnering among the various constituencies named above is driven by Indiana's desire to increase student access to higher education and to increase college graduation rates. The financial investment made at the federal, state, local, and family/individual level is not yielding acceptable results in terms of degree attainment. Secondary and post-secondary schools are focusing more effort on facilitating college preparation and graduation than ever before; and the government is increasing efforts to ensure that college is accessible to those at the lowest income level. As educational costs soar, local businesses and industries are attempting to support the educational goals of their communities with private finances.

Competition 05 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

The Pell Grant no longer serves as a true foundation of financial aid for low-income students, and such students must come up with increased amounts of money to meet educational expenses. (McSwain) In addition to federal and state efforts to respond to this issue and others related to educational funding, colleges and universities are also attempting to respond to issues in managing affordability. Several factors which have contributed to this trend are: rising college costs; decreased purchasing power of federal Pell Grant and first-year Stafford Loan; increasing discount rates in the private sector; changing student demographics; increased family borrowing; and declining yield rates. Examples of several institutional responses to this financial problem are: level tuition programs; institutional guarantees that a student will graduate in four years, or the fifth year is free (four-year promise); elimination of loans for students whose families are at 200% of the federal poverty level (with work-study condition); 100% tuition and fees grant funding for Pell-eligible families; institutional loan programs with low interest rates; subsidized PLUS loans; 12-month payment plans; pre-payment plans. (Crockett) Providing students with early estimates of scholarship and financial aid eligibility is more important than ever.

Competition 06 (IUSB): 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.

See rationale provided in Trend Statement Competition 05. As a result of major challenges to college affordability and the resulting decrease in accessibility for low and middle income families, institutions are seeking to partner with local communities in an effort to increase college enrollment and graduation rates, and to support the institution's diversity goals and overall mission.

Competition 07 (IUSB): 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.

Students are remaining anonymous in their college selection process longer than ever before, making web sites the most important messaging channel to communicate with this group of prospects. Inquiry level predictive modeling has become a valuable tool, as has segmenting communication strategies at both the prospect and inquiry stages, and by level of interest. Surveys show that a large majority of high school students will give colleges a valid E-mail address, but when this occurs varies throughout the application/selection process stages (inquiry, applicant, after acceptance, after student's final decision).

Student preferences also vary on whether or not they would take calls from college reps on their cell phones, or would accept text messages from a school. In addition, student opinion is mixed on how college and universities should utilize social networking sites to market to and connect with interested students. Online financial aid estimators and tuition cost calculators are of top importance to students; and blogging, podcasting, and live chat/IM are increasingly offered on school sites.

Competition 08 (IUSB): Financial Literacy

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

Rising college costs, student debt, and a souring economy have fueled interest in programs to help students understand the basics of credit, budgeting, and money management. The new Higher Education Act also addresses the need for student financial counseling, and says specifically that guarantee agencies must work with colleges to develop financial-literacy programs. Universities believe they have a responsibility to help students in this area and are responding with a variety of programs including one-on-one counseling, for-credit classes, workshops, online presentations, and interactive tools. (Supiano)

Competition 09 (IUSB): Accelerated Degree Programs

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

Comments from the community stakeholder survey corroborated this trend.

Convenience, cost (not price), quality experience, supportive environment, and application of learning all will appeal to adult learners. Quality of accelerated programs and creative scheduling has not been shown to be less than that of programs concerned with time involvement as a key component of course design.

Demographic

Summary

- Baby boomers continue to age, and, as they retire, they will take valuable experience with them that will need to be replaced.
- Racial and ethnic diversity continues to increase.
- The number of high school graduates will decrease in Indiana over the next several years, income disparities will continue to widen, and students lose confidence in the promise that college education will benefit them.

Demographic 01 (IUN): Strength of the 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.

“The strength of America is in the population that’s closest to retirement.” Patrick Callan, President of the National Center for Public Policy and Higher Education.

- American students placed twenty-fourth in math literacy and twenty-sixth for problem-solving (which is below the international average) on PISA, the Program for International Assessment, which measure the performance of 15 year-olds in forty-one countries. J. Kao, Innovation Nation
- Experienced, older workers will leave the workforce. Seniors 65+ swell from 12% to 20%+ of the Indiana population over the next 30 years. Today’s teenagers will slowly fill those ranks, making up the bulk of the workforce in 25 years.
- Changing structure of the economy will call for more “knowledge workers” setting the new standard of higher education at the Master’s level and requiring students to stay in college longer.
- Aggregate academic achievement of students in k-12 demonstrates at best flat or inconsistent improvement and requires considerable effort to mitigate.
- America’s population growth has been increasingly reliant on immigration to maintain population growth. Hispanic immigration, in particular, drives a portion of this trend. More than half of the adult Hispanic population does not have a high school diploma.
- Families that haven’t had a college graduate in their family will have to supplement this knowledge based economy. First generation college students, of underrepresented minorities or otherwise, face challenges to completing or even starting college.

Demographic 02 (IUN): Geographic Shifts Locally

The most recent census data indicate the population in the Northwest Indiana Region is shifting away from the urban centers.

Comments from the community stakeholder survey corroborated this trend.

The population of Gary, the largest city in Lake County decreased by 22 percent to 80,294 to become the second largest city in Lake County. The population of Hammond decreased by 2.7 percent, but it is now the largest city with a population of 80,830 residents. The third largest city is Portage at 36,828 residents with a 9.9 percent growth. Merrillville had a 15.3 percent growth to 35,246 residents and Schererville had a 17.7

percent growth with a population of 29,243. Valparaiso is the largest city in Porter County with a 15.7 percent growth rate and a population of 31,730.

Demographic 03 (IUN): Census Race/Ethnicity Trends

The US Census Bureau predicts that through 2025, the Hispanic population will increase by 11.2% becoming the largest minority group in the US. All other minority groups will increase by approximately 9% while Caucasians will decrease by about 19%.

Comments from the community stakeholder survey corroborated this trend.

Globalization continues to impact our institutions of higher education along with the changing demographics of the US which is resulting in a rapid increase in the diversity of student populations; including, origin, race, gender, sexual orientation, culture, etc. High unemployment rates nationally, even higher in minority communities, results in an increase in the student population.

Demographic 04 (IUN): 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.

Comments from the community stakeholder survey corroborated this trend.

National, state, and local demographics examined by various sources all indicate that Indiana has been experiencing strong growth in the number of high school graduates over the past several years, but this rate is slowing considerably. Nationally there is an indication we will see an overall decline in high school graduates through 2015, and Indiana will see declining high school graduates from now until 2015 too. Beyond 2015, however, Indiana's annual number of high school graduates is expected to begin growing again.

Examining these reports from the National Center for Education Statistics (NCES) and Western Interstate Commission for Higher Education (WICHE), one will notice that near future trends show closing of a decade of growth in high school graduates that will level off for the next several years in Indiana. The analysts expect a rebound and rapid growth in Indiana in the latter part of the next decade (2015-2020) and beyond should demographic patterns remain the same.

Demographic 05 (IUN): 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.

Howe and Strauss have dominated the literature in generational studies since the current younger adult generation began in 1982, and they based the premise of their research on the idea that there is a pattern to the generations that come and go throughout history. Howe and Strauss predicted back in the 1980s that the current population of younger adults would become the world's next "Greatest" generation. Future history may still prove them correct, but in the meantime, this generation is still maturing, and researchers, who have been critical of Howe and Strauss, present some fairly compelling evidence that sheds some doubt on the idea that the "Millennials" will be the next "Greatest" generation.

The research that exists to counter the idea that the Millennials will present themselves as a civic-minded generation requires a more behavioral approach rather than a historical one. Dr. Jean M. Twenge, author of *Generation Me*, has researched numerous databases and survey results spanning generations. She has concluded that the current generation of college bound students are a product of the culture that they were born into, but as a group the behavior of this generation – that she extends to include many of the Generation X group – is narcissistic in its broader worldview. She states from the beginning that, "this generation has

never known a world that put duty before self.” Others like Dr. Mark Taylor concur with Dr. Twenge, stating the next generation of college students has been, “socialized with a focus on esteem building over skills development,” and that, “education is viewed as a commodity to be consumed, acquired, accumulated (credit hours), not as personal, created, transformational process.”

Both researchers have plenty of good things to say about the younger generation as well, and they continually emphasize the characteristics offered in their research constitutes generalizations where plenty of exceptions and divergence from the norm occur. The important point still applies though that the current generation of college students view the world very differently than the older institutions established to serve them, like higher education.

Demographic 06 (IUN): 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.

Comments from the community stakeholder survey corroborated this trend.

There seems to be a general consensus among demographers that these shifts in population will take place in the United States. The patterns of natural increases and migration both contribute to the changes. This is a continuation of an existing trend that will really take off after 2015. While it is true that Indiana’s racial and ethnic composition will shift, the state is – and will remain – much less diverse than the nation.

Indiana Business Research Center projects for the state of Indiana a 135 percent increase in the number of people claiming a bi-racial heritage, 54 percent increase in Asian Americans, and a 26 percent increase in African Americans between 2005 and 2030. Those people claiming a Hispanic ethnicity in Indiana is expected to double (100 percent growth) in that same time period. This is all compared to White, Non-Hispanics whose growth rate will stay at a more modest 8 percent growth rate in that same time period.

Demographic 07 (IUN): 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.

Comments from the community stakeholder survey corroborated this trend.

If current trends continue into the future, then poverty may be one of the largest and most persistent barriers to youth reaching their education potential. Starting early in a child’s education there are disadvantages – among them violence, drugs, and teen pregnancy – within poor communities that cycle back to only make things worse.

The list goes on and on, but in the end the chance of a young adult in the bottom quartile in income receiving a bachelor’s degree before the age of 24 is at about 10 percent. Federal reliance on loans instead of need based aid, state budgets strapped for cash and decreasing financial support for higher education, and rising tuition all create barriers to those that cannot manage to pay for their education on their own.

In our primary service area, poverty has taken a hold of more families than the previous decade. This has been of serious concern to local school officials and professionals that know all too well the impact poverty can have on education.

Demographic 08 (IUSB): Baby Boomers and College

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

Comments from the community stakeholder survey corroborated this trend.

The Baby Boomers have grown up, and now are retiring as the social class with the most expendable income. They will spend it in many non-traditional ways, and one of them is by becoming non-traditional students. Soon classes will be filled with millennials and Baby Boomers taking classes with very different learning styles.

Demographic 09 (IUN): 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.

Comments from the community stakeholder survey corroborated this trend.

- From 2000 through 2007 the Latino population in Indiana grew by about 47 percent. Latino population numbers are expected to continue a rapid growth rate in Indiana, but at a lower rate than the rest of the nation. Indiana Business Research Center has projected an additional 18 percent increase in the Latino population between 2010 and 2015.
- Western Interstate Commission for Higher Education projects in Indiana a nearly doubling of the number of annual Latino high school graduates every year expected by 2015.
- Compared to their White, Non-Hispanic peers the rate of Latino students going directly to college from high school is somewhat lower, so many new Latino students are among the non-traditionally age students (*i.e.* over 25 years of age).
- National figures suggested that Latinos are entering college at a comparable rate to White, Non-Hispanics and African Americans, but they are not completing a baccalaureate degree at nearly the same rate.

Demographic 10 (IUN): 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.

- Indiana population growth of 729,623 or about 12.0 percent between 2000 and 2030
- Indiana will rank 31st in population growth in that time period
- Indiana #14 in population in the U.S. currently; expected to be #18 by 2030
- Indiana growth rates: 2000-2010; 5.1% | 2010-2020; 3.7% | 2020-2030; 2.8% | 2000-2030; 12.0%
- Midwest growth rates: 2000-2010; 4.7% | 2010-2020; 3.1% | 2020-2030; 1.5% | 2000-2030; 9.5%
- Midwest continues to decline as a proportion of the U.S. population: 2010 about 21.8 percent of the U.S. population; 2015 about 21.3 percent

Demographic 11 (IUN): Age Distribution Shift 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).

- Indiana ranked 28th in 2000 with 12.4 percent (equal to the national average) of the population over 65

years old

- By 2010 about 12.7 percent of Indiana's population will be over 65 (slightly under the national average of 13 percent); rank will fall to #34
- By 2030 about 18.1 percent of Indiana's population will be over 65; rank of 41st in the nation
- Change in total Indiana population by 2030 of 12.0 percent; over 65 year olds change of population projected at 63.6 percent

Demographic 12 (SCUP): Promise of College Degree

Students are graduating without jobs and with debt. They enrolled in record numbers with the promise that a college degree would bring better employment. That's not proving to be the case (*The New York Times*, July 6, 2010, www.nytimes.com/2010/07/07/business/economy/07generation.html?_r=1&th&emc=th).

Comments from the community stakeholder survey corroborated this trend.

- A Pew research report indicates that 37 percent of 18–24-year olds are unemployed, the largest percentage in 50 years (*The Christian Science Monitor*, April 23, 2010, www.csmonitor.com/layout/set/print/content/view/print/295191; *USA Today*, February 23, 2010, www.usatoday.com/news/education/2010-02-24-millennials24_ST_N.htm).
- Even when they have a job, 64 percent are unhappy in it (*Herman Trend Alert*, January 23, 2010, www.hermangroup.com).
- Even graduates with sought-after degrees like nursing and accounting had dim prospects. Fewer than half of US accounting majors had job offers this spring (*Yahoo! News*, June 9, 2010, www.news.yahoo.com/s/ap/20100609/ap_on_bi_ge/us_jobless_graduates/print).

Economic

Summary

- The energy sector will play a role in Indiana's economy in a number of ways, including biofuels, renewable energy, and the investment of BP in the Whiting refinery.
- The increasing demand in the areas of life sciences, pharmaceuticals, and health care creates a significant role for Indiana in the global marketplace.
- Slow economic recovery continues to put a strain on funding for K-12 and higher education. Higher education is still expected to increase "production" of degrees, to provide a trained workforce for tomorrow.

Economic 01 (IUN): Sustainable Industries

As the focus moves from the individual focus of the Reformer Generation to the collective focus of the Civic Generation, new theories are emerging which state the purpose/goal of any business/organization should be to create shared value by supporting its supply chain to create a sustainable industry.

Competition and greed have not been effective in creating a sustainable model of business and its role in society. Supporting the supply chain by ensuring fair return on labor at each stage of production creates a sustainable model, which is sustainable for the industry and the nation.

Economic 02 (IUN): Degree Production

The number of adults with college degrees in Indiana needs to increase to remain globally competitive.

The Lumina Foundation, Indiana Chamber of Commerce, and Indiana Commission for Higher Education have expectations of a net increase in higher education degrees in order for the State of Indiana to remain economically competitive. The expectations have been incorporated into the metrics the state considers when funding public institutions of higher education.

Economic 03 (IUN): BP Whiting Refinery Expansion

The \$3.8 billion BP Whiting Modernization Project will increase the refinery's capacity to process Canadian heavy crude by 260,000 b/d and increase the facility's gasoline and diesel production by 4.7 billion gallons per year, which is approximately 15% of the current annual output.

Presently, BP Whiting receives crude from three sources in roughly equal amounts: predominantly heavy crude from Canada; sweet and sour crude from the southwest U.S.; and mixed grades of foreign and offshore domestic sources. BP would like to increase its use of the Canadian crude--particularly from the Oil Sands via an Enbridge pipeline from Alberta to Illinois--from 30% to 80-90%. Before it can do so, it must equip the refinery to process the additional volume of heavy crude.

Economic 04 (IUSB): 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.

In March 2006, Indiana Governor Mitch Daniels announced plans to build the world's largest biodiesel plant in the state. Lois Dreyfus Agriculture Industries LLC plans to build the plant near Claypool, Indiana. The new facility will produce up to 250,000 gallons of biodiesel per day, which adds up to more than 80 million gallons per year. With this facility, two other biodiesel and six ethanol plants currently under construction, Indiana is emerging as a leader in producing renewable fuels. This new plant will utilize soybeans and once the plant is completed it will be one of the first biodiesel production plants to fully integrate with a soybean processing plant. With the facilities under construction, the state will produce an additional 400 million gallons of ethanol annually and 95 million gallons of biodiesel. Indiana's goal is to produce a combined 1 billion gallons of ethanol and biodiesel annually.

The U.S. has turned to its heartland to seek fuel from its farms and Indiana answered with one of the most aggressive biofuel initiatives in the country. According to Lt. Gov. Becky Skillman, who also serves as the secretary of agriculture and rural development, Indiana is "rapidly moving from nowhere to national leadership."

Biodiesel is good for the environment. Vehicles using biodiesel produce fewer emissions of carbon monoxide and other harmful pollutants.

Indiana currently has four fuel terminals with biodiesel blending capabilities, the second most in the nation. It also has the third-highest number of public pumps, with 68 offering biodiesel.

Indiana is getting a soybean processing facility and a biodiesel production facility. To have both planned for construction is unprecedented in the U.S. today," says Chris Novak executive director of the Indiana Soybean Board.

There are related economic benefits. For example, the construction of nine new biofuel plants is a reversal of plant closings that have dominated the news in recent years. Skillman notes the combined projects is an investment of \$600 million in capital expenditures and creates some 375 new jobs.

Economic 05 (IUSB): Indiana's Life Sciences 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.

Indiana University and Purdue University plan asked the 2009 General Assembly to create a research alliance, the Indiana Innovation Alliance, to grow the state's bio- and life sciences industries. The alliance would also improve the public health and increase the number of physicians being trained in Indiana. The universities are proposed that the Legislature create the alliance by appropriating \$35 million in each of the upcoming fiscal year 2009-2011 state biennial budget. The funding would include \$5 million each year to expand the capacity of the IU School of Medicine to educate physicians. The School of Medicine's goal is to increase medical student enrollment by 30 percent over a six-year period and expand programs at its eight regional centers for medical education. The medical expansion is designed to meet an expected shortage of physicians in the next decade. The focus of the alliance would be on research with applications in business, including the potential to create new companies. Research focuses of the alliance would encompass medical and health-related fields, pharmaceuticals, bioenergy and biofuels, nanotechnology, health-care delivery and the environment.

According to IU President Michael McRobbie, the alliance is "a coordinated way toward the state's key educational and economic development goals. It means we will be able to marshal the resources and capacity we need to be competitive with the nation's top tier of life science research centers." Expected outcomes of the alliance include: increased funding for research and development, bringing new funds to Indiana; attracting and retaining academic and commercial researchers, innovators and entrepreneurs; increasing the number of healthcare professionals statewide; and reducing the healthcare spending growth rate by companies and organizations.

Central Indiana is already home to global leaders in the life sciences, companies like Lilly, Roche Diagnostics, Dow AgroSciences, Guidant and the Cook Group. Currently, IU is home to the nation's second largest-medical school and also has top-ranked programs in analytical chemistry and other key science areas. According to Wade Lange, Indiana Health Industry President and CEO, Indiana "has an incredible life sciences industry base - one that employs 320,000 Hoosiers in 1,200 companies. We already have the world's largest orthopedics company.

As a whole, Indiana employs 6.1 percent of the nation's Drugs and Pharmaceuticals workers. And, the state was one of only four states that experienced gains of more than 1,000 employees with the Medical Devices and Equipment subsector since 2004. In addition, over the past six years, funding from the National Institutes of Health grew at 21 percent, which is almost twice the national rate. A report from the Battelle/Biotechnology Industry Organization identifies Indiana as one of only three states to have specialized bioscience employment in three of four niche subsectors. Indiana has the second highest concentration of biopharmaceutical jobs in the country. Indiana is also home to nationally-recognized hospital systems including Clarian Health Partners.

Economic 06 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

International competition is shifting the economic landscape, and Indiana's exports to international markets have reached record levels. A weakening U.S. dollar has made US goods less expensive on global markets, but the state has also pursued expansion to overseas markets. Continued partnerships with international companies, and recent trade missions by the State of Indiana to China and India have shown promise in bringing more jobs to Indiana by international firms.

Workers need more advanced skill sets & US education is falling behind that of other countries; the gap between the rich & poor is widening; job volatility, consumer psychology, and Boomer products will influence buying behavior (this was identified as a trend - boomer products); banking & investments, tax structures, and the US budget deficit are areas to "watch".

Economic 07 (WFS): Econophysicists

Physicists could become tomorrow's leading economic forecasters.

Unlike mainstream economists, who rely on averages, econophysicists study complex systems, feedback loops, cascading effects, irrational decision-making, and other destabilizing influences, which may help them to foresee economic upheavals.

For instance, researchers exploring a variety of complex networks claim to have discovered strange similarities between the functioning of the stock market, the Arctic, and the human brain. Many complex systems—including market exchanges, animal populations, and ecosystems—exhibit identifiable "early warning" behaviors prior to big disruptive shifts like crashes, according to a 2009 paper published in the journal *Nature*.

Economic 08 (SCUP): Economic Recovery

There appears to be little consensus on when and how we will see an economic recovery. Signs of improvement are often paired with those of continued recession.

Comments from the community stakeholder survey corroborated this trend.

- Nobel prize winner, Paul Krugman, predicts the US is at the start of a third great depression; one on par with the Long Depression of the 1880s and the Great Depression of the 1930s (The New York Times, June 27, 2010, www.nytimes.com/2010/06/28/opinion/28krugman.html?ref=paulkrugman).
- Nearly three-quarters of global executives surveyed by McKinsey say it's at least somewhat likely that a sovereign-debt default will harm their countries' economies over the next 12 months (McKinsey Quarterly, June 2010, www.mckinseyquarterly.com/PDFDownload.aspx?ar=2621).
- In February at the World Economic Forum in Davos, Switzerland, economists and financial experts had very mixed opinions about the strength of a global recovery and that was before Greece and the continuing turmoil in equity markets (Knowledge@Wharton, February 3, 2010, <http://knowledge.wharton.upenn.edu/article.cfm?articleid=2428>; Knowledge@Wharton, January 6-19, 2010, Newsletter, <http://knowledge.wharton.upenn.edu>).

Economic 09 (SCUP): State and Federal Funding

The US pipeline to higher education is also being drastically affected by the recession. Even with Race to the Top and funding for K-12 jobs, the ability of many states and districts to adequately support education is declining rapidly.

Comments from the community stakeholder survey corroborated this trend.

- Even with modest rebounds in most states, K-12 education leaders are still facing serious budget shortfalls that will entail more job cuts, more crowded classrooms, and fewer resources for student learning (American Association of School Administrators, April 8, 2010, www.budurl.com/Study040810; The New York Times, April 21, 2010, www.nytimes.com/2010/04/21/education/21teachers.html?scp=1&sq=School+Districts+Are+Warning+of+Huge+Layo+ffs&st=nyt).
- State general fund spending has declined for an unprecedented two fiscal years, as tax revenues from all sources have plunged (National Association of State Budget Officers, www.nasbo.org/Publications/FiscalSurvey/tabid/65/Default.aspx).
- Spending cuts have not been enough to avoid bankruptcy in municipalities, as their tax receipts have had their steepest drop in over 50 years (Reed Construction Data, May 25, 2010,

www.reedconstructiondata.com/news/2010/05/state-and-local-government-spending-to-decline-again-in-fy-11/).

Economic 10 (SCUP): Renewable Energy Resources

Energy from renewable resources now accounts for nearly the same amount of domestic US energy production as nuclear power, about 11 percent (*E/The Environmental Magazine*, December 28, 2009, www.emagazine.com).

- Europe already has about 400 waste-to-energy plants that have reduced heating bills and removed landfills. Unfortunately, the US has only 87 such plants and there are no new ones being planned (The New York Times, April 12, 2010, www.nytimes.com/2010/04/13/science/earth/13trash.html?_r=1&scp=1&sq=Europe Finds Cleaner Energy from Trash&st=cse).
- After nine years, the first offshore wind farm was approved. Research indicates that if multiple offshore wind farms could be connected together in a power generating grid, it would ameliorate the problem of variable wind speed that now causes energy fluctuations (The New York Times, April 28, 2010, www.nytimes.com/2010/04/29/us/29wind.html; Proceedings of the National Academy of Sciences, February 23, 2010, W. Kempton, F. Pimenta, D. Veron, and B. Colle, "Electric power from offshore wind via synoptic-scale interconnection," www.pnas.org/cgi/doi/10.1073/pnas.0909075107).
- Researchers are coming closer to creating a commercially viable process for making biofuel from either algae or E. coli (*E/The Environmental Magazine*, March 29, 2010, www.emagazine.com; Converge, April 24, 2009, www.convergemag.com/stem/Future-Forces.html?page=1).

Education

Summary

- There will be increased regulation, assessment, and reporting at all levels of education, to meet the demands for greater accountability.
- There will be decreased financial support for education, as state and federal tax revenues remain scarce.
- Education will continue to stretch existing resources in innovative ways, and find new sources of revenue from other sources.
- Greater numbers of poorly prepared students come to college, as the demand for more college graduates increase.

Education 0 (IUN): Nursing Faculty

Nurse faculty workforce nears retirement, and continued inequities in faculty salary in nursing.

New York, NY — September 22, 2010 — Research continues to point to increasing nurse faculty shortages in years to come, according to data released today by the NLN. The percentage of faculty ages 30 to 45 and ages 46 to 60 both dropped by 3 percent between 2006 and 2009. At the same time the percentage of full-time educators over age 60 grew dramatically from only 9 percent in 2006 to nearly 16 percent in 2009. Overall, fifty-seven percent of part-time educators and nearly 76 percent of full-timers were over the age of 45 in 2009.

"Adding to the difficulty of addressing the ongoing national shortage of nurse educators that will worsen as the workforce ages," said NLN CEO Dr. Beverly Malone, "is the fact that salaries of nurse educators remained notably below those earned by similarly ranked faculty across higher education."

(http://www.nln.org/newsreleases/faculty_census_092210.htm)

Education 0 (IUN): Online Courses

Shift to on-line courses to meet student demand for flexible scheduling of courses to fit their busy lives.

Larger enrollment, cost savings, quality improvement, and meeting the needs of students' schedules are potential benefits to moving to on-line courses if done well.

Education 0 (IUSB): Competition with For Profit Institutions

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

With increasing gas prices and a public that values convenience, online classes are appealing. Online degrees and online courses are plentiful and reasonably priced. Many education companies market online courses for credit and institutions that offer online degrees are now accredited. Several of these for-profit institutions even have brick and mortar facilities along the U.S. 30 corridor in Northwest Indiana.

In addition, the Indiana Commission for Higher Education has recently released the report Reaching Higher: Strategic Initiatives for Higher Education in Indiana. This report notes the increasing enrollment at community colleges due to affordability, location, and cost. These factors suggest that IU Northwest will need to sharpen its mission, identify critical community needs, and market itself to target appropriate students.

Education 0 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

All data confirm that state support for public education has been decreasing and will continue to do so in the future. Increasing tuition and fees have offset the decrease in public appropriations in the past. Public higher education institutions will face increased scrutiny when tuition and fees increase in the future and will be held accountable for these increases.

Education 0 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

Enrollment continues to increase in higher education institutions, but the perception remains that degree completion in a reasonable amount of time remains unacceptably low. Many returning adults attend college to gain specific skills and training without any intention of completing a degree, however, traditional age students are more likely to enroll with a major and degree in mind. Legislators demand that institutions of higher education be held accountable for raising the number of students who complete degrees in 4 – 6 years.

Education 0 (IUSB): Privatization of Services

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

Decreasing state appropriations will continue to force colleges and universities to investigate more cost effective ways to provide services including dining services, counseling services, information technology services, facilities maintenance services, and others. Increasing consideration will be given to outsourcing, privatization, or both in the future.

Education 0 (IUSB): Adjunct Faculty

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

Fewer individuals choose to complete terminal degrees than in the past. At the same time faculty salaries in public institutions are less competitive than in the past. Because there are fewer applicants for faculty positions and lower salaries offered to those applicants public colleges and universities having increased reliance on contingent faculty other than tenure-track faculty with advanced degrees.

While many of these contingent faculty members possess exceptional expertise they are often part-time employees, work at more than one institution, and have no job security. Relying on contingent faculty may impact student learning and may have questionable results for the effectiveness of college programs including teacher education and school leadership programs.

Education 0 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

Technology is being used extensively to support a globally based economy and institutions of higher education are being challenged to provide access to higher education using distance and online-based methods as well as virtual reality to prepare students to work in this technology based world.

Education 0 (IUN): 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.)

A significant controversy surrounds the measurement of the U.S. population's attainment of a high school diploma, which is addressed in the source material; but regardless of the measurement there seems to be a consistency in what the numbers show. An educational attainment gap continues to exist between that of whites, and most underrepresented racial/ethnic minorities, including African-Americans, Hispanics, and Native Americans. The gap has been shrinking for the past 40 years, but the rate of progress has slowed in the last 10 years. The income status of an individual seems to play a significant role in educational attainment as well.

According to the research that has been done other common factors that act as barriers to educational attainment include: 1) Recurring cycles of poverty; 2) Language barriers; 3) Poor early childhood interventions and preparatory education; 4) Low self-esteem and lack of role models (feelings of alienation and apart of American dream); and 5) single parent households.

Education 1 (IUSB): Math and Science

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

1) Students, particularly in inner-city schools, are receiving deficient education in math and science; 2) K-12 teachers are ill-prepared to teach math and science; 3) Minority students and women are often discouraged from taking challenging math and science courses; 4) School officials and teachers are ineffective in dealing with math and science anxieties; and 5) Capable students steer clear of demonstrating math and science aptitude for fear of peer pressure.

Education 1 (IUSB): College Remediation

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

Comments from the community stakeholder survey corroborated this trend.

Most estimates demonstrate that roughly one out of three college students need some sort of remediation before continuing towards their goal of a college degree. While that rate has only fluctuated slightly over recent years, the rate of high school graduates going on to college and the sheer numbers of college students has increased dramatically. A strong desire exists nationally to send more high school graduates to college and some may be marginal students, so rather than sacrificing standards the additional at-risk students will need remediation.

Education 1 (SCUP): Student Success

Retention and completion have moved into the top spot for support and attention by the US government, foundations, associations, and institutions (*The New York Times*, May 3, 2010, [www.nytimes.com/2010/05/09/magazine/09fob-wwln-t.html?scp=15&sq=billion to higher education + foundation&st=cse](http://www.nytimes.com/2010/05/09/magazine/09fob-wwln-t.html?scp=15&sq=billion%20to%20higher%20education%20foundation&st=cse)).

- The top 100 metropolitan areas in the US saw fewer adults between 25 and 34 obtain bachelors degrees in the past eight years, with the gap between the cities with the highest and lowest rates growing from 8 percent in 1990 to 34 percent in 2008 (Brookings Institute, May 2010, A. Berbube, "The State of Metropolitan America: Educational Attainment," www.brookings.edu/metro/MetroAmericaChapters/education.aspx).
- About half of US college students who start a four-year degree finish in six years. Fewer than 30 percent of students pursuing a two-year degree full-time earn it within three years (Complete College American, June 2010, www.completecollege.org/alliance_of_states/).
- Community colleges have made an explicit commitment to adjust their mission beyond access to completion (American Association of Community Colleges, June 2010, C. Mullin, "Rebalancing the Mission: The Community College Completion Challenge," www.aacc.nche.edu/Publications/Briefs/Pages/rb06152010.aspx).

Education 1 (SCUP): International Students

International students enrolled in record numbers in the US in 2008, with the increase more pronounced for undergraduate than graduate studies (Institute of International Education (IIE), November 16, 2009, www.iie.org/en/Who-We-Are/News-and-Events/Press-Center/Press-Releases/2009/2009-11-16-Open-Doors-2009-International-Students-in-the-US).

- The US continues to have both the largest number of international enrollments and the greatest share of mobile students (Center for International Education, Number 58, Winter 2010, www.bc.edu/bc_org/avp/soe/cihe/newsletter/Number58/p9_Green&Koch.htm).
- While there are no centralized data, US colleges appear to be using conditional admission contingent on completing an English language-learning program as a means of attracting international undergraduates

(The Chronicle of Higher Education, August 8, 2010, www.chronicle.com/article/Colleges-Extend-Conditional/123783/).

- A fall 2009 online survey by IIE indicates that undergraduate enrollment increases are unevenly distributed across institutions. Campuses that already have a significant international student population, particularly Chinese students, were more successful at recruitment than institutions with smaller international populations (Institute of International Education, November 16, 2009, www.iie.org/en/Who-We-Are/News-and-Events/Press-Center/Press-Releases/2009/2009-11-16-Fall-2009-Enrollment-Survey).

Education 1 (WFS): Class time?

The notion of class time as separate from non-class time will vanish.

The Net generation uses technologies both for socializing and for working and learning, so their approach to tasks is less about competing and more about working as teams. In this way, social networking is already facilitating collaborative forms of learning outside of classrooms and beyond formal class schedules. Sure, the kids use Facebook during the lecture, but that doesn't mean they aren't interacting with subject matter.

The next generation of college students will be living wherever they want and taking many (if not all) of their courses online. They will earn degrees that are accredited by international accrediting agencies. The era of hyperconnectivity will require most professionals to weave their careers and personal lives into a blended mosaic of activity. Work and leisure will be interlaced throughout waking hours every day of the week, and student life will reflect the same trend. In this way, self-directed learning will be the most important taught skill of the future.

Education 1 (WFS): Terminal Degrees

The future is crowded with PhDs.

The number of doctorate degrees awarded in the United States has risen for six straight years, reaching record 48,802 in 2008, according to the National Science Foundation's Survey of Earned Doctorates. One-third of these degrees (33.1%) went to temporary visa holders, up from 23.3% in 1998. Science and engineering doctorates have increased by more than 20% in the past decade and by 3.2% from 2007 to 2008. Computer science had the largest rate of increase (7.9% in 2007-2008 and nearly double in the past decade).

In contrast, doctorates in non-science and engineering fields have declined, particularly the humanities (down 7.1%) One exception is education, which awarded 2.1% more doctorates in 2008 than in 2007.

Education 1 (SCUP): Delivery of Education

The delivery of instruction in higher education has been evolving for a number of years. Recently, the proposed changes have been more visibly focused on core missions.

- Four-year institutions are looking to offer bachelor's degrees in three years (Indianapolis Star, April 19, 2010, www.indystar.com/article/20100419/NEWS04/100419027/-1/NEWS/Daniels-State-needs-3-year-college-degrees; Los Angeles Times, March 24, 2010, www.latimes.com/news/local/me-uc-future24-2010mar24,0,4457597.story).
- Florida's community colleges have been able to offer four-year degrees for nearly a decade (The Chronicle of Higher Education, January 19, 2007, www.chronicle.com/article/Floridas-Higher-Education-/122776/). Other community colleges are offering one-year associate's degrees (The Chronicle of Higher Education, April 25, 2010, www.chronicle.com/article/Experiment-at-Ivy-Tech-a/65221/)
- The mayor of Chicago has called for an end to "open door" admissions at Chicago City Colleges (Education Week, August 13, 2010, www.blogs.edweek.org/edweek/college_bound/2010/08/chicago_considers_ending_community_college_open_admission.html).

Education 1 (SCUP): Reauthorization of ESEA

Higher education needs to pay attention to how the reauthorization of the Elementary and Secondary Education Act (ESEA) progresses. The US federal administration has given clear signals that it will find ways to make changes, with or without legislation.

- The winners of the first round of Race to the Top funding focused on low-performing schools, teacher quality and distribution, state data systems, and the use of data and assessments (Education Week, January 4, 2010, [www.edweek.org/login.html?source=http://www.edweek.org/ew/articles/2010/01/06/16esea_ep.h29.html&destination=http://www.edweek.org/ew/articles/2010/01/06/16esea_ep.h29.html&levelId=2100](http://www.edweek.org/ew/articles/2010/01/06/16esea_ep.h29.html&destination=http://www.edweek.org/ew/articles/2010/01/06/16esea_ep.h29.html&levelId=2100)).
 - The National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO) released a common set of academic standards for English and mathematics in June. Their aim is to ensure consistent learning goals across the states (eSchool News, June 2, 2010, www.eschoolnews.com/2010/06/02/final-common-standards-in-english-math-released/).
 - Computer-based testing and multiple measures of achievement are at the core of the administration's requirements for assessment projects seeking funding from Race to the Top (eSchool News, April 16, 2010, www.eschoolnews.com/2010/04/16/assessments-get-21st-century-makeover/).
-

Health and Wellness

Summary

- The aging population will bring an increased demand for health care workers, and the demand will bring a change in how health care is managed.
- The cost of health care continues to rise, and the number of uninsured/underinsured continues to grow.

Health and Wellness 01 (IUN): Health Education Growth

Baby boomer aging will require more care and more practitioners of this age will be retiring. Shortages of all health care personnel are predicted; up to 30 percent increase in capacity of universities to produce doctors and nurses are being projected as necessary.

Comments from the community stakeholder survey corroborated this trend.

Demographic trends favor need for education of all health care practitioners in order to meet health care demand.

Health and Wellness 02 (IUN): Uninsured

Numbers of uninsured/underinsured continue to rise due to not only unemployment but also the cost of health care.

Comments from the community stakeholder survey corroborated this trend.

The struggling economy and health care costs that increase at a rate much faster than wages has created an increasing gap between those that can and cannot afford health care insurance.

Health and Wellness 03 (IUSB): Shift to Health Management

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.

Spiraling medical costs and a general sense that the American health care system is not serving the population has led to calls for fundamental reform and restructuring. The Internet has provided individuals with more options and greater information about their health and illness than ever before.

In order to save money, companies and insurers are moving from a focus on health care, to a focus on health and wellness and prevention. To a certain extent, dissatisfied users of the mainstream medical system have already taken matters into their own hands and begun to use complementary and alternative medicine (CAM) options on a widespread basis. Developments in genetic research and therapy, along with greater personal responsibility for one's own health and wellness are leading to an increased personalization in medical care and health and wellness regimes. Patients are picking and choosing based on doctors recommendations, Internet, and complementary and alternative therapies.

Interest in health and wellness has also led to a greater interest in nutrition and demand for healthy food choices, as well as a rapidly growing interest in non-Western practices such as yoga, meditation, Tai Chi, etc. Health care providers and workers will be challenged to respond to these trends, as well as the call to computerize all medical records in an attempt to increase the efficiency and safety of the health care system.

Health and Wellness 04 (IUSB): 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 caregiving, and pension systems.

Comments from the community stakeholder survey corroborated this trend.

In the United States, the proportion of the population aged >65 years is projected to increase from 12.4% in 2000 to 19.6% in 2030 (3). The sex distribution of older U.S. residents is expected to change only moderately. Women represented 59% of persons aged >65 years in 2000 compared with an estimated 56% in 2030. However, larger changes in the racial/ethnic composition of persons aged >65 years are expected. From 2000 to 2030, the proportion of persons aged >65 years who are members of racial minority groups (i.e., black, American Indian/Alaska Native, Asian/Pacific Islander) is expected to increase from 11.3% to 16.5%; the proportion of Hispanics is expected to increase from 5.6% to 10.9%.

Labor Force

Summary

- The aging workforce: some may delay retirement, but the inevitable exit of millions of workers from the labor force will create a gap in the skill levels of employees.
- Demand for accountants and auditors is expected to increase at a faster than average rate, compared to the rest of the labor force. Other financial sector careers also continue to be in high demand.
- The need for Registered Nurses will also grow at a faster than average rate, and too few will advance their education (e.g. Master's level) to meet the demands of health care.

- The growth of the teaching profession will increase at an average rate of about 13 percent, but demand could be exacerbated by additional dynamics like the aging workforce trend.

Labor Force 01 (IUN): Delaying Retirement

Older Workers remain or return to workforce.

Comments from the community stakeholder survey corroborated this trend.

Older workers either cannot afford to retire or wish to remain or return to the workforce to supplement their retirements or obtain benefits. These workers often want to learn new skills or utilize the skills and experience they have acquired over years of work.

Labor Force 02 (IUN): Business Jobs

The 50 best careers of 2011 include accountant, financial adviser, financial analyst, sales manager and training specialist and actuary. Employment of accountants and auditors is expected to grow by 22 percent between 2008 and 2018, which is much faster than the average for all occupations.

Alexis Grant “Best Careers of 2011, US News and World Report December 6, 2010.

Accountants and auditors will have a very large number of new jobs arise, about 279,400 over the projections decade. An increase in the number of businesses, changing financial laws and corporate governance regulations, and increased accountability for protecting an organization’s stakeholders will drive job growth.

Labor Force 03 (IUN): Healthcare

Nine of the top 20 fastest growing occupations are in the health care industry between 2008-2018, and the demand for registered nurses is expected to increase 22 percent in that same time period.

According to the Bureau of Labor Statistics some of the fastest growing healthcare occupations include: home health aides, physician assistants, dental hygienists, dental assistants, and medical assistants to name a few. In terms of total numbers needed by 2018 Registered Nurses tops the list with over a quarter of a million more R.N.s needed.

Labor Force 04 (IUN): Teachers

Employment of kindergarten, elementary, middle, and secondary school teachers is expected to grow by 13 percent between 2008 and 2018, which is about as fast as the average for all occupations.

Through 2018, overall student enrollments in elementary, middle, and secondary schools—a key factor in the demand for teachers—are expected to rise more slowly than in the past as children of the baby-boom generation leave the school system. Projected enrollments will vary by region. Rapidly growing States in the South and West will experience the largest enrollment increases. Enrollments in the Midwest are expected to hold relatively steady, while those in the Northeast are expected to decline. Teachers who are geographically mobile and who obtain licensure in more than one subject are likely to have a distinct advantage in finding a job (BLS).

Labor Force 05 (IUN): Degrees in Nursing

There are currently too few nurses choosing to advance their education.

With the downturn in the economy new graduates of nursing programs are frustrated that the job market is tighter than they expected. Some schools have responded by reducing admissions so as not to flood the

market. However, The “Tri-Council is very concerned that diminishing the pipeline of future nurses may put the health of many Americans at risk, particularly those from rural and underserved communities, and leave our healthcare delivery system unprepared to meet the demand for essential nursing services. Practicing nurses and those new to the profession are strongly encouraged to see the current trend in RN entry-level employment as an opportunity to move their career to the next level.”

“First is a need for education advancement to the baccalaureate level then to the graduate level to meet the urgent need for Advanced Practice Registered Nurses (APRNs) and nurse educators. Current healthcare reform initiatives call for a nursing workforce that integrates evidence-based clinical knowledge and research with effective communication and leadership skills. These competencies require increased education at all levels. At this tipping point for the nursing profession, action is needed now to put in place strategies to build a stronger nursing workforce.” (*The Tri-Council is an alliance of four autonomous nursing organizations each focused on leadership for education, practice and research.*)

Labor Force 06 (IUN): Demand fo Healthcare Record-Keeping

There is an estimated need for 30,000 more Medical Records and Health Information Technicians by 2016.

Medical records and health information technicians maintain the millions of documents the healthcare industry produces. Paperwork includes x-rays, medical histories, lab tests, and treatment plans. Every patient has detailed medical records, and it is necessary that these records be kept organized and confidential. Even with the proliferation of online and electronic health records, the medical records field is expected to grow faster than average.

Labor Force 07 (IUSB): Advanced Manufacturing

The need for advanced manufacturing skills will increase through 2021.

Comments from the community stakeholder survey corroborated this trend.

“Advanced” manufacturing in our region is replacing traditional “old” manufacturing and manufacturers. These new industries and new techniques will require a new set of skills from the labor force. The existing labor force will either need to be retrained or replaced by workers able to make this transition.

Labor Force 08 (IUSB): Local Government

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

Comments from the community stakeholder survey corroborated this trend.

- Governor Daniels’ Circuit Breaker
- Shepperd-Kernan Report
- Additional recommendations to eliminate local government personnel

Labor Force 09 (IUSB): Turnover in the 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.

Comments from the community stakeholder survey corroborated this trend.

The primary force behind Indiana's changing population is the inevitable aging of the baby boom generation. At present, this group is between the ages of 44 and 61 and, by 2030, this entire cohort will be of traditional retirement age. This fact promises to transform the state.

There will be a steady decrease of those in the labor force aged 25-54 over the next 15 years before it

rebounds from 2020 to 2040. Rural areas of the state of Indiana will be the most affected with a 9 percent decline in this age group by 2020. These labor force realities could hinder prospects for Indiana's economic growth over the next 20 years, particularly rural areas of the state.

Labor Force 10 (IUSB): 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.

- Experienced, older workers will leave the workforce. Seniors 65+ swell from 12% to 20%+ of the Indiana population over the next 30 years. Today's teenagers will slowly fill those ranks, making up the bulk of the workforce in 25 years.
 - Changing structure of the economy will call for more "knowledge workers" setting the new standard of higher education at the Master's level and requiring students to stay in college longer.
 - Aggregate academic achievement of students in k-12 demonstrates at best flat or inconsistent improvement and requires considerable effort to mitigate.
 - America's population growth has been increasingly reliant on immigration to maintain population growth. Hispanic immigration, in particular, drives a portion of this trend. More than half of the adult Hispanic population does not have a high school diploma.
 - Families that haven't had a college graduate in their family will have to supplement this knowledge-based economy. First generation college students, underrepresented minorities or otherwise, face challenges to completing or even starting college.
-

Political

Summary

- Increased accountability and planning mandates from federal, state, and accrediting authorities.
- Increased political pressure to keep higher education affordable amidst diminishing or shifting funding sources (*e.g.* Pell Grants).

Political 01 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

The Higher Education and Opportunity Act of 2008 gives every indication Federal regulation is not expected to go away and more could be coming no matter which party gets into office. Federal regulation of Higher Education has been creeping up for some time and is primarily being driven by tuition rates that have steadily been increasing over the last 10 years or so.

Eloquently stated in an article, *College Leaders, After 'Dodging a Bullet,' Plan Next Accreditation Battles* written by Paul Baskin, "dispense with the mythology of the separation of state and higher education, translated by the education community as, Give us money and leave us alone."

Accrediting agencies are increasingly being asked whether they are doing enough to ensure that the colleges they oversee are performing well enough. The federal government and public are looking for assurance that universities are providing affordable quality education while holding the line on tuition costs.

Political 02 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

College Affordability: The Wolf in Sheep's Clothing, by Anthony Carnevale:

"As tuitions rise, college enrollments shift from private colleges to the lower priced publics creating an increasing public funding burden, especially in recessions when families are looking for bargains . . . in public colleges, tuition", price students and families pay for college, "never covers full cost", what colleges pay to educate students). Public postsecondary education is one of the few businesses where every new customer means bigger losses" . . . "Governments, especially state governments, are paying a declining share of increasing costs at public colleges. When governments pay less, students have to pay more through rising tuition and fees."

Pell Grants Said to Face a Shortfall of \$6 Billion, by Sam Dillon & Tamar Lewin:

". . . almost nine million students nationwide completed the federal aid application required for federal grants and loans, a 16 percent increase over last year." Many of these students are applying and qualifying for student aid." . . . "Still, rising tuition, shrinking state aid to colleges and the shaky economy are pushing college out of reach for many low-income students."

With the on-going recession and bleak future economic outlook there is no evidence that this trend will not continue for the next 3-5 years.

Political 03 (IUSB): 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.

Rising tuition coupled with a shaky economy is making college unaffordable for many students. Parents who were depending on college savings plans for college tuition are finding their plans underlying investments have not met their expectations. As such, community college is becoming a cheaper and more realistic alternative for lower and middle-income students. Community colleges are becoming more attractive to students as an affordable alternative to more expensive 4-year public schools. Community colleges are seeing record increases in enrollment.

In an article, "Harper bid for 4-year degrees has area colleges steaming", notes "*Trends around the country are leading community colleges to offer vocational bachelor's degree programs*". And another, "*Florida's community colleges shift toward 4-year degrees*", highlights one such pilot program where students can earn bachelor's degrees in teaching, nursing and business management.

The Pell Grant Equity Act removes "tuition sensitivity" so that students attending lower cost institutions do not have their maximum Pell grant award reduced.

Political 04 (IUSB): Consolidation of School Systems

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

- Need to establish school districts that are large enough to provide high-caliber education at a lower cost and enhance fiscal responsibility.

- To increase efficiency and effectiveness

Political 05 (IUSB): 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, and Green Party)

Green lobbying is primarily being fueled by rising fuel prices, concerns about global warming, economic meltdown, and the loss of **millions** of manufacturing jobs over the past decade. Groups who historically have been at odds such (environmentalists, businesses, and unions) are beginning to work together as allies in a united cause to save the environment and create new jobs.

Blue Green Alliance lobbying group has this to say:

“Job Opportunities in a Green Economy: Indiana Can Gain from Fighting Global Warming. In Indiana, there are nearly 340,000 jobs in a representative group of job areas that could see job growth or wage increases by putting global warming solutions to work. And the benefits of those new jobs would spread to a much wider swath of the economy.”

An article in the Wall Street Journal points out “Green is the New Color of Lobbying. Washington - Lobbying for green energy has become a red hot business here”. This type of lobbying effort is also happening at the Indiana State level as environmentalists, business, unions and legislatures are starting to see the green in President Obama’s Stimulus plan.

Encouraging from the Indiana State legislature is Green Jobs Development Act, not yet passed though, which theoretically will “*promote jobs in renewable energy and energy efficiency*”.

A trend of this nature will last well into the next 3 to 5 years and beyond.

Political 06 (IUSB): Privatization

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

- “Since the early 90s, the U.S. has had no comprehensive transportation development, and responsibilities were pushed off to states, municipalities and metropolitan planning organizations.” (NYT, 8/27/08)
- State and local funds are shrinking creating budget gaps that make public-private partnerships more attractive. (NYT, 8/27/08)
- “Investment funds stand to reap handsome fees from the crisis in infrastructure,” Ten to 20 years from now infrastructure could be larger than real estate,” said Mark Weisdorf, head of infrastructure Investments at JP Morgan. (NYT, 8/27/08)

Political 07 (IUSB): Creative Funding for Education

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

- Insufficient state revenue through taxation because of slow economic growth
- Property tax caps exacerbating state revenue shortfalls

Political 08 (IUSB): ICHE’s Reaching Higher Plan

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

ICHE set a goal to be among the top 10 states in the nation for degree completion by 2012. The new strategic

plan will tie financial funding to early degree completion, focus on the role of the community college, and award excellence and efficiency that will be evaluated through new accountability standards.

Indiana's higher education has the current stark statistics:

- 4 year graduation rates average a mere 36% and 57% after 6 years
- 22% of all Indiana students and 65% of community college students need remediation
- Hoosier families have experienced an average doubling of tuition and fees at public four year universities over the past 10 years
- Indiana residents currently rank 35th nationally in average personal Income
- Indiana ranks 10th in the nation with 62 percent of its high school grads enrolling in college, but they fail to persist once on campus

Political 09 (IUSB): Community Organizations

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

Citizens now are asking for and demanding more transparency and accountability from local leaders. They are increasing their involvement in the community and political arenas. They view themselves as stakeholders and are holding the elected and appointed officials more accountable.

Political 10 (SCUP): Support versus Regulation

Even as public funding for higher education decreases, the number and cost of regulations at the federal and state level increases.

Comments from the community stakeholder survey corroborated this trend.

- Changes in the student loan process, particularly how the “cohort default rate” (CDR) is determined for each institution, will require campuses to spend considerably more time on compliance and likely subject them to bad publicity, as nearly everyone expects CDRs to increase (Today's Campus, April 2010, www.todayscampus.com/article/load.aspx?art=2018).
- At the same time, the US Departments of Education and Health and Human Services have failed to exchange data that allows the tracking of those who have defaulted on student loans in the past two years (Inside Higher Ed, March 17, 2010, www.insidehighered.com/news/2010/03/17/ndnh).
- Year-round Pell Grants are likely to further complicate the work of financial aid offices, as they need to prove that summer courses helped to accelerate degree completion. This is likely to be a labor-intensive process (University Business, June 2010, www.universitybusiness.com/viewarticle.aspx?articleid=1598).

Science and Technology

Summary

- Improved computing technology and networking infrastructure will provide tools to improve learning and the delivery of education, as well as the capability to improve organization operations.
- Mobile computing technology will accelerate the speed of business, and change the way we conduct our daily lives.
- Cybercrime will become an increasing problem, as information technology permeates more of our lives and work.

Science and Technology 01 (IUN): Convergence

The shared world-wide Internet Protocol (IP) network infrastructure is becoming the primary media for all public and private data types including mission critical -- databases, banking, news, entertainment, GPS, voice, utilities, building management, security, video, government, military, etc.

This trend of placing more and more data types on the shared IP network is called “convergence”. Year after year, convergence is elevating the importance of the IP data network by demanding 24-7 sigma six (99.999%) reliability. There is a need to communicate with relative ease/reliability/safety minus restrictions, and to share information. (consume, broadcast, discuss, monitor, research)

Science and Technology 02 (IUN): Smartphones

Sale of Smartphones exceeds PC sales, use of Smartphones to become ubiquitous.

The Smartphone provides similar capabilities as a PC; additionally it serves as a phone/video conference device.

Science and Technology 03 (IUN): Twitter

Twitter messages effective in positively impacting behavior. Email is passé.

Twitter usage is now nearly pervasive by the Gen Y'er. Gen Y'ers are likely to respond to reminders via text message; email is now passé.

Science and Technology 04 (IUN): Virtual Computer Labs

Technology officials at several colleges that have recently deployed or tested “virtual computing labs” agree that the day of large dedicated computer facilities will be replaced with informal and collaborative work areas. This advancement will also transfer to the workflow of faculty and staff members making an efficient and powerful impact.

Students, faculty and staff access software and data from a large computing facility or powerful desktop computer, but similar computing power now will be available on laptops, tablet computers, and smart phones. Virtualization will allow for this software and data to be available in one or all of these areas so that individuals will have access on any intelligent device that supports virtualization, practically anywhere an internet connection is available.

Science and Technology 05 (IUSB): Cybercrime

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

Because of immense storage capacities, the susceptibility of users to phishing/social engineering and the volume of sensitive data (including data stored “in the clouds”), computer systems in higher education are under siege by those 1) who would use our storage as a repository for illegally obtained copyrighted data and 2) who would seek to obtain passwords and other personal data for identity theft purposes.

Science and Technology 06 (IUSB): Classroom Technology

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

Comments from the community stakeholder survey corroborated this trend.

Both web applications and portable electronic device technology (virtual worlds, video streaming, classroom capture software, web conferencing, data mashups, podcasting) will supplement and enhance both traditional

face-to-face instruction and distance education. Emerging technologies are increasing capabilities for communication and learning. Virtual world/gaming applications are in place and being used for instruction.

The Horizon Report 2008 identifies six emerging technologies that will or already are impacting higher education: 1) Grassroots Video, 2) Collaboration Webs, 3) Mobile Broadband, 4) Data Mashups, 5) Collective Intelligence, 6) Social Operating Systems.

Science and Technology 07 (IUSB): Laptop (Notepad?) Initiatives

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

The strong reliance on technology for research, communication, and collaboration has led to a need for ubiquitous computing on campus. The age-old lab model no longer can support the needs of our students and their employers. A 1-to-1 program, like those run at over 400 college campuses, would provide each student with a laptop by increasing the cost of attendance by the cost of the laptop. That would dramatically reduce the need for campus labs, thereby recovering the costs of the physical computers, lab attendants, and energy needed to continuously run nearly 700 desktop computers on campus. Additionally, the university would recover classroom space that is currently used for labs. The financial savings could be put into providing more reliable wireless access, wireless printing, and user support. Our students would have more computing experience and access, thus better preparing them for their career choices.

Emerging Issue: With the emergence of notepad and smartphone computing, and mobile computing applications, a shift away from the laptop might accelerate the process.

Science and Technology 08 (IUSB): Virtual Environments

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

Because of the green movement, rising energy costs, convenience, and diminishing budgets there is an increased emphasis on wiser use of resources, both natural and economic. Virtual environments, such as those listed above, have the potential of reducing costs without affecting the educational mission.

Science and Technology 09 (IUSB): 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."

As universities' budgets tighten, they look for ways to cut costs. One of these ways being utilized is through the use of in-house-developed or open-source software that is generally available for low- or no-cost. Linux, OnCourse, Sakai and Quali are examples of open-source applications or projects in use in higher education today. Cloud computing is a term that refers to the use of off-site hosted (usually webbased) applications and off-site data storage in lieu of software and storage installed on machines that reside in individual offices or workstations. (From Wikipedia – "cloud computing" is a style of computing in which IT-related capabilities are provided "as a service", allowing users to access technology-enabled services from the Internet ("in the cloud") without knowledge of, expertise with, or control over the technology infrastructure that supports them.)

(SCUP) The outsourcing of IT infrastructure, particularly servers, is combining with virtualization software to create opportunities for savings.

- It's clear that moving data storage and some software functions to the cloud saves money for most institutions (EDUCAUSE: ECAR Research Bulletin 4, 2010, www.educause.edu/ecar).
- In an effort to cut costs, state and local governments are expected to adopt cloud computing, virtualization, service-oriented architecture, open-source software, and geospatial technologies at a compound annual growth rate of 22 percent over the next five years (Federal Computer Week, December 23, 2009, www.fcw.com/articles/2009/12/23/states-and-local-agencies-cloud-computing.aspx?sc_lang=en).

- The National Institute of Standards and Technology (NIST) has begun the process of creating standards for the cloud related to data interoperability, portability, and security (Government Computer News, May 20, 2010, www.gcn.com/articles/2010/05/20/nist-standards-portal.aspx?sc_lang=en).

Science and Technology 10 (IUSB): 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.

Comments from the community stakeholder survey corroborated this trend.

Distance education is a globally established and accepted form of instruction and degree completion. According to Kim and Bonk (2006) distance education should see continued growth. The authors note that increasing student demand, emerging web technologies, growth of Internet capabilities, and tight campus budgets will push the growth of online courses and programs. Kim and Bonk discovered more specifically an increased need for online certificate and short program (Associates/Masters) offerings along with a rise in blended learning that combines both traditional face-to-face instruction with online. Improvements in online course content, online pedagogy, and student and instructor readiness for online learning are also seen as factors that will increase online and distance education.

Science and Technology 11 (SCUP): Electronic Readers

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

- Accessibility issues for e-readers must be addressed, but hopefully not on a reader-by-reader basis (Converge, January 14, 2010, www.convergemag.com/edtech/The-Future-of-Learning.html).
- E-textbooks represent a large market for growth, with one seller reporting a 400 percent sales increase between 2008 and 2009 (The Chronicle of Higher Education, January 19, 2010, www.chronicle.com/blogPost/Leading-E-Textbook-Seller-R/20566/).
- In competition with e-textbooks and e-readers are services that rent printed textbooks—but students can't really write in any of them (Inside Higher Ed, January 12, 2010, www.insidehighered.com/news/2010/01/12/rent).

Society, Lifestyles, and Values

Summary

- The idea of diversity among people continues to redefine itself beyond traditional dimensions of race, gender, and socio-economic class, and with greater variance within those dimensions.
- How we relate to work, institutions, consumer markets, technology, and other people is in constant flux.

Society, Lifestyles, and Values 01 (IUN): Collective Action

As the nation greets the era of a new Civic Generation, more people will expect the institutions they interact with to provide opportunities for them to make a difference in their community through collective action.

Comments from the community stakeholder survey corroborated this trend.

The Nation has entered the era of a new Civic Generation, which began in 2003 and is now on the rise for the next 20 years. This Civic Generation is focused on making a difference through collective action.

Society, Lifestyles, and Values 02 (IUN): Rejection of Hype

The focus of the civic generation is on honesty and genuine expression.

No one listens to hype anymore.

Society, Lifestyles, and Values 03 (IUN): Stress Management and Engagement

Organizations that promote enjoyable activities for their employees that can multi-purpose improving the work environment, engage the employee, and relieve stress will retain workers that have high satisfaction with their jobs.

Most people like to live, work, or go to school where the environment is pleasing. Most people have good intentions of helping the community and maintaining a healthy lifestyle. An example of this would be "Weed Therapy" that would enlist current members of the university community to spend maybe 15 minutes a week helping to beautify the campus by pulling weeds and similar. With "Weed Therapy," everyone can win. Not only can the campus environment be improved, but "Weed Therapy" can be a great stress reliever. It promotes mild exercise and allows for a break from the normal routine.

Society, Lifestyles, and Values 04 (IUSB): 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.

There are regular articles about sustainability in the Chicago Tribune, and the New York Times. Local and national media also run stories on sustainability on an almost daily basis. ABC, CNN, NBC, FOX have all had "green weeks" and advertise how they are going green. Business is doing the same, from Starbucks to WalMart. In other words, in the last several years, we have seen a social and cultural transformation in attitudes towards the threat of climate change, the environment, and the future. Perhaps one of the most powerful indicators of the magnitude of this shift and its impact on organizations and businesses is the impact already felt by the auto industry. Those companies that have anticipated and responded to this transformation with high mileage and hybrid cars report record sales of these vehicles. This transformation is affecting all sectors of the society, economy, and culture.

(SCUP) The environment remains a priority on many campuses, even with financial difficulties. More importantly, perhaps, institutions are moving beyond green buildings and energy consumption as their only strategies to becoming more sustainable.

- More than 100 student government presidents urged Congress to launch a national program for clean energy science and engineering education (Americans for Energy Leadership, April 28, 2010, www.leadenergy.org/reenergyse/resources).
- The state of Maryland is likely to adopt a graduation requirement for K-12 students that would ensure that environmental literacy is taught across the curriculum. Meanwhile, its federal legislators push for its inclusion in the reauthorization of the Elementary and Secondary Education Act (Education Week, July 16, 2010, www.edweek.org/ew/articles/2010/07/16/37environment.h29.html?tkn=NOYFALDNTIIj8DpuSTqYFxDCEdsyVnKJ8jG&print=1).
- More than 100 new programs in 'green studies' were added by colleges and universities in the US in 2009, compared with the three programs begun in 2005, and students are filling them as fast as they are created (USA Today, December 27, 2009, www.usatoday.com/money/industries/environment/2009-12-27-green-colleges_N.htm).

Society, Lifestyles, and Values 05 (IUSB): 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.

The widespread use, rapid development, falling prices, miniaturization, integration, and increasing power of computers, personal data assistants and mobile phones has led to an explosion in a new form of social interaction, virtual or e-based social networking. Social networking includes such practices as smart mobbing, distributed innovation, and collective assessment. The recent development and rapid growth of Facebook and uncountable social networking sites like it indicates that this trend is strong and will continue to develop. Increasingly, business, new organizations, major brand companies, community organizations, and a host of shared interest groups are recognizing and harnessing the power of social networking to carry out their missions. Perhaps the most salient and successful recent example has been the Obama presidential campaign's early recognition and use of social networking to out raise and eventually defeat his initially thought to be undefeatable primary opponent Hillary Clinton, and his eventual win of the presidency. As our cell phones, notepads/tablet readers, PCs, music and DVD players, and TVs become increasingly integrated, more portable, more powerful, and more affordable, this trend will continue to develop and morph.

Society, Lifestyles, and Values 06 (IUSB): Relocalization

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

Fueled by rising energy prices, fears of globalization, and concerns about economic well-being, there is a growing movement towards a new localism. We have seen this movement start in the 1990s in response to fears of globalization and the move of jobs and factories offshore. It then took root in the area of food production and consumption through the leadership of Slow Food. Initially begun in Italy, this has become a worldwide movement. It is reflected in the US by the recent burgeoning of Farmers Markets, once limited only to large urban centers, in small towns all across the country. Most recently, the movement has begun to encourage people to "Buy Local" in order to support local economic development and small businesses. Ironically, one force driving this new localism is the desire to recapture a sense of community and connection in the global village, which has been made possible by the communications and information revolution. Most recently it has been fueled by increasing fuel prices and a desire to reduce the amount of energy needed to provide goods and services for our communities, and concerns about the safety of our food supply and products from other countries.

Society, Lifestyles, and Values 07 (IUSB): 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.

There has been a huge increase over the last three years in personalized learning, personal shopping, Do-It-Yourself (DIY). Simulated worlds like Second Life are going on Web 2.0 and colleges and universities are beginning to open "virtual" campuses there to attract and engage students. These trends reflect peoples' desires to create deeply personal and individual relationships with the products and services they consume. The trend within education of "helicopter" parents swooping in to ensure individualized treatment for their children has been well documented. We are familiar with IEPs (Individualized Education Plans) for students with special needs in schools.

As more parts of our lives become commoditized, deep personalization represents our reaction to loss of identity in the face of globalization. However, it also reflects current market realities: the forces of free-market capitalism that drive manufacturers to produce and market products to ever more narrowly defined "niches" in order to continue to grow and post profits.

Society, Lifestyles, and Values 08 (IUSB): Digital Technology and Learning

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

Comments from the community stakeholder survey corroborated this trend.

There are numerous articles about the “digital generation,” pointing to the coming of age of a generation with access to the Internet, smartphones, ipods, notepads/tablets, and other wired and digital devices. Teenagers, we are told, are “digital natives in a land of digital immigrants.” Any enterprise that wants to reach young people is advised to use texting instead of direct mail; establish a Facebook presence, or go live in Second Life. However, other studies indicate that digital dexterity may not be as widespread as pundits claim. Many youth cannot always afford the devices themselves, and, those who can are less likely to truly experiment with them unlike previous generations who got into the guts of then developing computer technology.

[Aside: It remains unclear whether the youth of America are really as tech and media savvy as we give them credit for being—which has implications for the ongoing push in higher education to pump up the use of technology in teaching and learning.]

Society, Lifestyles, and Values 09 (IUSB): 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.

In 2000, there were 3.1 million interracial marriages in the U.S., enough to force changes in census procedures to allow Americans to use more than one racial category to define their identity. By 2003, nearly 13% of all American marriages were interracial, a trend that has continued. A 2005 Gallup Poll found that 95% of people aged 18-29 approved of interracial relationships. Thus, numbers of multiracial children are also increasing, with Tiger Woods and Barack Obama representing two well-known examples. Chinese-Latinos in New York City are just a further example of diversity within diversity.

Marketers are aware of, searching for, and targeting these more diverse identities using various forms of segmentation techniques. Political candidates search for individuals with just the right intersection of characteristics as important swing voters in tightly contested elections. Finally, certain scientific sectors are working to achieve the “mathematical modeling” of humanity as they seek to commodify human beings.

As people frame their identities in more diverse ways, it opens the possibilities of new alliances for political and social action (as in the ads about the environment that feature Al Sharpton and Pat Robertson united).

Society, Lifestyles, and Values 10 (IUSB): Spirituality

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

For the last decade or two, America has been embattled in a set of culture wars centered on politics and religion. Surveys and studies show that traditional congregations and organized religion are losing ground, as religion and spirituality become more a matter of choice than family inheritance. In part this is a result of the growing diversity in American society, in part a result of the information and communications revolution. Significant growth in Islam, as well as non-Western religious traditions is leading to a great diversity of opportunities from which believers can choose.

There has also been an increase in the number of non-believers, as well as individuals who express non-theistic spirituality. As a result, many Americans, especially young Americans find themselves searching for meaning in their lives, as well as a meaningful way in which to express their values and connect up with communities of likeminded persons. This diversity of belief will also call for greater tolerance, understanding, and acceptance among persons of differing faith, as well as those who profess no faith at all.

Society, Lifestyles, and Values 11 (IUSB): Redefining Retirement

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

Comments from the community stakeholder survey corroborated this trend.

A 1997 study reveals that older people are learning in numbers and amounts of time expended at a rate far exceeding expectations. Fueling the demand is a new generation of retirees who are more affluent, better educated, and healthier than any previous generation in American history.

Studies of participation in formal or organized adult education programs reveal that the percentage of older adult participants is modest but expected to grow. A second trend that appears in recent literature is advocacy of age-integrated, instead of age-segregated, programs and policies. The plethora of information available over the Internet both about and for older adults is a third trend related to older adults with implications for educators. Many older adults are actively using the Internet as both consumers and producers of information. Information about many aspects of aging can be found on the Internet. The use of the Internet by older adults is consistent with the kind of education in which they tend to engage--informal and noncredit, and educators need to consider how they can use it to support and deliver educational programming for older adults.

Society, Lifestyles, and Values 12 (IUSB): 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.

As people live into their 80s and 90s, remaining relatively healthy until later in life, they may choose to marry and have families early or to build careers and postpone marriage and family until later in life, or to marry early but have children later, or to never do either. Women who become single parents and women who have "empty nest" syndrome have been two stable populations for our educational system in recent years. As women either marry and have children later or don't have children at all, this will alter when and how they seek education. Men and women who postpone marriage and family until later in life may be more likely to experiment with different careers earlier in life and so return for additional training or to make an entire career shift.