

Innovative Degree Programs Matched to City Strengths

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Abstract

In recent years, IUPUI has steadily acquired a considerable national reputation as an up-and-coming university. Some of the reasons for this recognition include the RISE Initiative and the large number of innovative degree programs recently started at IUPUI based on campus strengths and the priorities of the city of Indianapolis. Some specific degrees are in Motorsports Engineering, Sports Journalism, Music Technology, Event Tourism, Philanthropy, Art Therapy, and Public Health. RISE activities and the new programs open additional internship opportunities and transcriptable learning experiences for our students.

Today's urban research universities need to increasingly take advantage of their location to come up with strong academic programs that engage with the community. This article describes how Indiana University-Purdue University Indianapolis (IUPUI) has developed a number of new degree programs appropriate for the twenty-first century, based on its own academic strengths and aligned with the priorities of the city of Indianapolis. The IUPUI campus was established in 1969, and has steadily evolved over time into Indiana's premier urban public research university, with a focus on the health and life sciences. It is a campus which has always had a culture of taking community engagement and service learning seriously. As such, it was natural to establish activities, courses and innovative academic programs which connect with the city and enhance the undergraduate educational experience at the same time. The purpose of this article is to describe some of these recent developments at IUPUI.

First, we set the stage by describing the changing nature of scholarship over the past few centuries. Universities have shed their ivory tower image and have become increasingly engaged with all aspects of their communities. Then, we describe the "RISE to the IUPUI Challenge"—IUPUI's determined and systematic attempt to enhance real-life experiences for students, and capture these activities with the catchy and uplifting acronym RISE, which stands for **R**esearch, **I**nternational, **S**ervice learning and **E**xperiential learning. These RISE activities and courses provide a valuable tool for learning, and are recorded on student transcripts, thereby giving students an edge with potential employers. The challenge we present to our students is to take two or more RISE experiences prior to graduation. A detailed description of the new degree programs developed in the past three years at IUPUI is given in the next section. The programs are academically solid, and are proving to be very appealing to both in-state and out-of-state students. The increase in geographical diversity of the student body is of educational benefit to all students. It also provides a substantial new revenue stream

for the IUPUI campus. We conclude this article by describing some of the recent national recognition which IUPUI has received as a result of our innovative efforts.

The Changing Nature of Scholarship— From Separation to Engagement

In the early 1800s, scholars at universities were typically preoccupied with problems in their own disciplines. The academy was viewed as a place for deep thought and the analysis of high-level issues. Professors took a philosophical outlook in their thinking and most were not particularly concerned about the practical concerns of everyday life. Societal needs and improvements were left to people who went to trade and professional schools.

In the United States, a major change in this aloof ivory tower image occurred with the passage of the Morrill Act of 1862, which established land grant universities. In particular, two important new trends emerged. First, land grant universities were expected to be engaged with their communities, especially in the fields of agriculture and engineering. Second, the Morrill Act showed that government considered it important to support higher education, since it would provide definite benefits to society. Gradually, professors from detached disciplines at land grant universities began to interact more among themselves and established connections with professional schools as well as the local community and industry. This connection had a rural flavor, and the focus on agricultural issues was appropriate, because in 1862, 80 percent of the population was rural and only 20 percent lived in urban settings (U.S. Census Bureau 2010).

Figure 1. A plot of the total US population as a function of time, and its urban and rural components. The data is from the US Census Bureau.

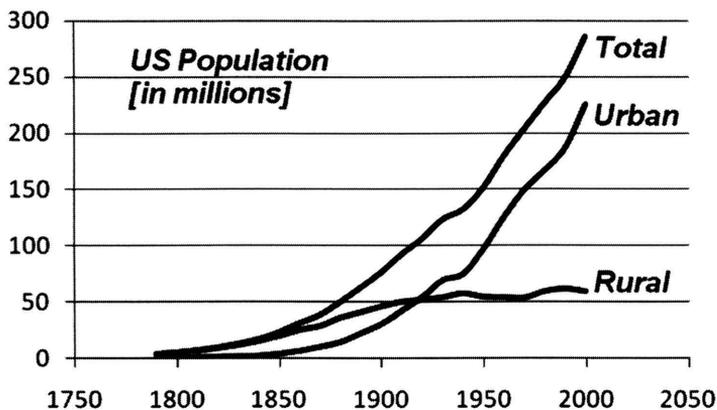
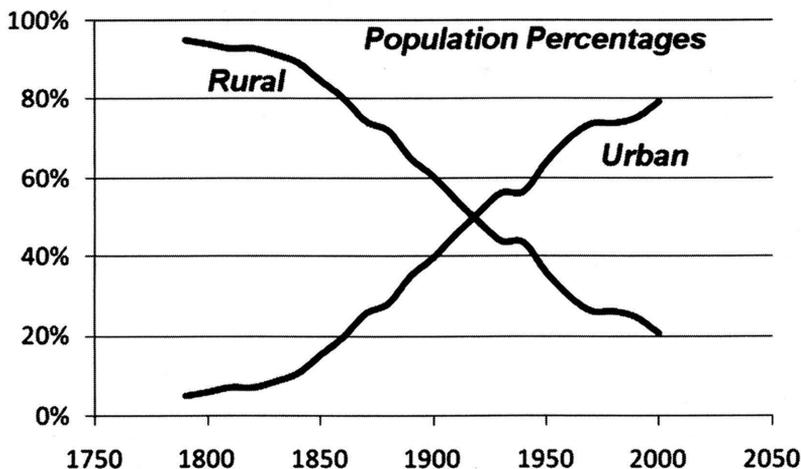


Figure 2. The rural percentage and the urban percentage of the US population as a function of time. The graphs are derived from the data in Figure 1.



From today's perspective, two important changes have occurred. First, population trends have shifted dramatically over the years. During the period from 1862 to now, the urban and rural populations have both steadily increased (see Figure 1), but the urban population has grown at a much faster pace. Consequently, at this time, 80 percent of the population lives in urban areas and only 20 percent lives in rural areas—a complete flip of the situation which existed when land grant universities were established (Figure 2). The shift in population percentages means that universities today need to be engaged in all aspects of urban life.

Second, the emphasis for engaging just the local community has changed. The past twenty years have seen a rapid growth in international activities and globalization. Further, the importance of human capital has been recognized. The emergence of a worldwide knowledge economy makes it essential that the student of today acquire a much broader international perspective in order to be a successful citizen of tomorrow.

An urban engaged university provides many benefits for the students and faculty, as well as the community. It would be appropriate to list some benefits here:

Real world experience for students is consistent with the change from a teaching to a learning perspective in higher education. It provides skills that future employers value (teamwork, communication skills, etc.) and which are not readily developed in a traditional classroom setting (AAC&U 2010).

Service learning is valuable for student learning, but it also leads to better retention and graduation.

Internship experiences often lead to employment opportunities after graduation.

Faculty members enjoy teaching classes which have a community engagement component.

University scholars have the opportunity to use the city as a laboratory and data source for their own research.

The scholarship of engagement is a growing field in the Boyer tradition of valuing discovery, integration, application, teaching, and creative artistry (Boyer 1993).

Urban engagement opens up the possibility of research funding from industry.

From the community's point of view, a high quality university improves all aspects of life. In particular, it is well-known that industries like to move to cities that offer high-quality education.

The economic vitality of the city is increased and the long-term economic benefit is enormous.

Higher education provides the human capital necessary to prepare a talented workforce which can not only handle today's jobs, but also has the background and skills to handle future jobs which cannot be envisioned today.

Thus, we have a compelling argument that the education we provide today should have a substantial urban engagement component as well as a global viewpoint. This outlook clearly explains why many people regard comprehensive urban public research universities like IUPUI as the future of higher education in the United States. Several university groups, such as CUMU (Coalition of Urban and Metropolitan Universities) and USU (Coalition of Urban Serving Universities), are strong public advocates of this viewpoint.

RISE to the IUPUI Challenge

At IUPUI, we started the RISE (Research, International, Service learning, and Experiential learning) initiative in 2007. To explain and motivate the establishment of RISE, it is important to have a little background information about our campus. In the mid-1960s, a number of city mayors began speaking publicly about the importance of having major institutions of higher learning in their cities. A major voice was that of Mayor Richard G. Lugar of Indianapolis, who gave a widely quoted speech stating that "a great city must have at its heart a great university" (Lugar 1968). Eventually, this led to the creation of IUPUI in 1969, as a combination of the educational programs conducted by Indiana University and Purdue University in Indianapolis at that time (Gray 2003). Consequently, IUPUI is currently a comprehensive institution which has twenty-one schools, including the schools of liberal arts and sciences, as well as professional schools for medicine, nursing, business, dentistry, law, engineering & technology, education, social work, art & design, and so forth. The annual IUPUI budget is approximately \$1.2 billion, which includes external research funding of about \$400 million. There are 2,500 full-time faculty and 31,000 students.

In the previous section, we argued the importance of urban engagement and international components in an undergraduate education. Many of the professional schools at IUPUI already require an experiential learning component as part of their training. Further, the research mission of the campus makes it natural to extend undergraduate research opportunities to undergraduates. The RISE acronym succinctly captures all of these features, so we challenged all IUPUI students to have two or more RISE experiences before graduation, such that this became a hallmark of the IUPUI undergraduate degree.

Let us describe the four components of RISE in more detail.

- “R” = Research that gives students a flavor of original scholarship and creative activity—the joy of discovering new knowledge. We provide many opportunities for students to participate in cutting-edge research in all disciplines. Approximately 600 undergraduates participate in research every year, their placements being facilitated by a dedicated Center for Research and Learning.
- “I” = International experiences such as Study Abroad or special courses that enhance student understanding of the world. About 450 students participate in Study Abroad every year. Further, IUPUI has established strategic international partnerships with Moi University in Kenya, Sun-Yat Sen University in China, and the University of Hidalgo in Mexico. This effort in globalization opens new avenues for our students and faculty. These international exchange partnerships were recognized via the 2009 Institute of International Education’s Andrew Heiskell Award for Innovation in International Education. They also provide a convenient way to introduce a service learning component into the international experience.
- “S” = Service learning opportunities that increase student commitment to civic engagement. About half the students entering American universities express a strong desire to “give back” to society. This desire is often intrinsic, and perhaps springs from the recognition that there are many people in the world less fortunate than they are. Some students eventually spend a considerable period of time in international work, such as the Peace Corps. Others may prefer a more limited local activity. In any case, higher education institutions do well to facilitate such opportunities and convert latent student desires into reality. In addition to civic engagement and volunteer work, real educational benefit for the students results from coupling these activities with suitable writing assignments and reflection, a valuable part of service learning. The IUPUI Center for Service and Learning facilitates the design of programs to engage students, faculty, and staff in educationally meaningful service. Each year, more than 250 community organizations in Central Indiana benefit from the active involvement of IUPUI students. Last year, about 4000 students engaged in community service, contributing a total of about 100,000 hours. IUPUI was one of three institutions from among 500 applicants recognized with the U.S. Presidential Honor Roll Award for Community Service in 2006.
- “E” = Experiential learning that often involves internships, student teaching, field work, clinical placements, and other activities in professional settings that better prepare students for the workforce. A large grant from the Lilly Endowment, administered by the IUPUI Solution Center, helps with internship opportunities.

Being located in downtown Indianapolis makes it easy for IUPUI students to work in government offices, top companies, and nonprofit organizations.

Thus, the RISE Initiative is a systematic attempt to formalize all the existing Research, International, Service learning and Experiential learning activities of our students, and to encourage new activities of this type to be developed. It was decided that participation could be recorded by tabulating which existing courses met the criteria to qualify as RISE courses. This was a simple way of adding a RISE annotation on student transcripts. Several campus-wide grants were also offered to faculty who were interested in developing new RISE courses. In order to get more resources behind the RISE Initiative, it was decided that RISE scholarships would be a priority of the currently ongoing fundraising campaign. Further, in order to encourage potential donors, IUPUI is offering an annual match of \$500 for every \$20,000 endowment towards a RISE scholarship.

Finally, it is appropriate to ask which desirable learning outcomes result from RISE experiences. IUPUI faculty played a pioneering role in developing six principles of undergraduate learning. Faculty have made these principles [Core Communication and Quantitative Skills; Critical Thinking; Integration and Application of Knowledge; Intellectual Depth, Breadth, and Adaptiveness; Understanding Society and Culture; Values and Ethics] the basis for curricular enhancement. They have shaped the national conversation on general education. Faculty structure and assess courses keeping the principles of undergraduate learning prominently in mind. This work has received national praise, as well as two Hesburgh Certificates of Excellence and an award from the Council for Higher Education Accreditation. The main point to make here is that RISE courses contribute heavily to all the principles of undergraduate learning. Indeed, as might be expected, the real-world aspect of RISE activities permits them to connect with many principles of learning much more easily than traditional classroom teaching. There is also ample survey evidence that future employers value students with these backgrounds (AAC&U 2010). Thus, we are confident that RISE experiences achieve the major goal of helping today's student become a productive, knowledgeable, skilled global citizen of tomorrow.

New Degree Programs

All institutions like to offer a wide variety of degree programs for their students. Several interdisciplinary degrees—such as bioengineering, museum studies, and forensic sciences—began about six years ago have proven to be remarkably attractive. As part of the IUPUI Academic Plan, we wanted to increase the percentage of out-of-state students on campus. So, aside from more aggressive marketing and recruiting strategies, we challenged the deans of all the schools to come up with proposals for innovative degree programs that reflect either IUPUI strengths or Indianapolis priorities, or both. This call for action was received by the faculty with widespread enthusiasm, and has resulted in the introduction of twenty-four additional creative degree programs: eight doctoral programs, nine masters programs, and seven bachelors programs. A few more degrees are still in the development stage. To economize on

resources, all programs build on the already existing courses in other degree programs, with a few more strategically added new course offerings. These degree programs are listed in Table 1.

We now describe some of the new degree programs developed in the past three years. The common feature of the eight new doctoral programs is that they are all in areas with strong prospects for external research funding. They also all take advantage of local connections. For example, Health and Rehabilitation Sciences works with the VA hospital on the IUPUI campus in researching the rehabilitation of severely wounded veterans from the Iraq and Afghanistan wars. Applied Earth Sciences work collaborates with state agencies based in Indianapolis on studies of lead and mercury contamination in water quality and the urban environment. Urban Education has close ties with school systems in the Indianapolis area to generate data on teaching innovations and student success. Indianapolis is a major center for health-related research such as new drugs, the design of health insurance programs, and medical devices. There is a web of internships and research collaborations among companies such as Lilly, Roche, and Zimmer, and the new health-related Ph.D. programs in Biostatistics, Epidemiology, and Health Policy and Management are all designed to position our Department of Public Health to eventually evolve into a School of Public Health. Likewise, the primary area of the Economics degree is health economics. Lastly, the Doctorate of Nursing Practice relies on medical facilities on the IUPUI campus and in the local community for its clinical training opportunities and simulations.

The strong local connections extend to many of the new masters and bachelors degrees. For example, Sports Journalism and Event Tourism align with the city's effort to be a major sports venue. Music Technology works closely with local music equipment companies. There are hundreds of small motorsports engineering firms in Indianapolis; Motor Sports Engineering works with a consortium that includes all of these firms, and they have had considerable success in placing students in internships so they can be directly involved in national racing events. In particular, a few months ago, several IUPUI interns used their engineering skills to make minor modifications in a top fuel dragster car that set a world speed record! The internationally renowned Center on Philanthropy has started a new B.A. in Philanthropic Studies, which is rooted in a liberal arts background. Students get some understanding of the practical aspects of fundraising, and have an opportunity to interact with the many nonprofit organizations in Indianapolis. These examples, which could be easily extended, illustrate the mutual benefits of these programs to the Indianapolis community, to students at IUPUI, and to the campus in targeting new programs constructed around local area strengths. IUPUI is focused on contributing to Indiana's development.

The programs are academically solid and they appeal to both in-state and out-of-state students. The increased exposure to ideas from outside Indiana adds distinct educational value to the education of Indiana students.

Conclusions

The RISE Initiative and the large number of new degrees at IUPUI are just two of the many features in IUPUI’s strategic plan for academic progress. Indeed, the IUPUI Academic Plan has been developed and almost fully implemented since 2006, and is beginning to yield excellent results. The faculty attitude has been very positive. IUPUI has always had a culture of civic engagement, and the recent directions have served to further strengthen its connections with the Indianapolis community. The new revenue streams coming from increased out-of-state and international enrollment have helped produce better educational outcomes. National recognition has come in many rankings, including three years in a row on the *U.S. News and World Report* list of “up and coming” universities who “recently made striking improvements and innovations—schools everyone should be watching.” IUPUI has moved up steadily from rank 13 to 7 to 5 in the 2010 ranking! IUPUI is a bright spot in Indianapolis. Its current advertising slogan is “Where IMPACT is Made”—IUPUI is indeed having a positive impact not just in Indiana, but throughout the nation.

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Table 1: List of 24 new degrees programs approved at IUPUI since 2007. Degrees marked with * are based on priorities in Indianapolis. The rest are based on current strengths at IUPUI and its focus on health and life sciences.

DOCTORAL DEGREES	SCHOOL
Health & Rehabilitation Sciences	School of Health and Rehabilitation Sciences
Biostatistics.....	School of Science
Economics	School of Liberal Arts
Epidemiology.....	School of Medicine
Nursing Practice	School of Nursing
Applied Earth Sciences*	School of Science
Urban Education*.....	School of Education
Health Policy and Management	School of Medicine

MASTERS DEGREES	
MFA Visual Art*	Herron School of Art & Design
MA Public Relations*	School of Public and Environmental Affairs
MA Applied Anthropology*.....	School of Liberal Arts
MS Criminal Justice and Public Safety*...	School of Public and Environmental Affairs
MA Sports Journalism*.....	School of Journalism

MA Art Therapy	Herron School of Art & Design
MS Event Tourism*	School of Physical Education and Tourism Management
PA Physician's Assistant	School of Health and Rehabilitation Sciences
MS Taxation*	Kelley School of Business

BACHELORS DEGREES

BS Motorsports Engineering*	School of Engineering and Technology
BS Music Technology*	School of Engineering and Technology
BS Nursing (at IUPUC).....	School of Nursing
BA Africana Studies*	School of Liberal Arts
BA Philanthropic Studies*	School of Liberal Arts
BS Health Sciences	School of Health and Rehabilitation Sciences
BS Energy Engineering*	School of Engineering and Technology

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