

FY 2011 School of Information Sciences Update

Prepared for the SIS Board of Visitors

November 15-16, 2010

The School of Information Sciences is a relatively small professional school in a large research university. As such, we have been focused on leveraging our faculty and staff resources effectively to:

- Achieve *financial stability* for our future,
- Foster *intellectual vitality* for our community, and to
- Provide *strategic leadership* for our professions.

Given the size of the school, it is clear that we cannot respond to all aspects of the information professions in depth in both research and teaching. Thus, we continue to identify areas of focus that engage significant numbers of our faculty members to address questions and areas that have been and will continue to be fundamental to our professions. We have done this with the Information Assurance area in the past five years; in the coming years, we plan on deepening a focus in the area of “Working Memory”. We look to identify an additional two or three such focus areas in the coming years.

We hired two new faculty members this year and are launching a search for a senior scholar for the Doreen E. Boyce Chair in Library and Information Science. Each faculty candidate is evaluated not just based on credentials and teaching need, but also for an innate interest in collaborating outside of their “home” discipline. This is intended to foster an engaging intellectual environment within the school, to build an identity with our professional peers and funding agencies outside the school, and, ultimately, to attract high quality students and research funding.

Our objectives

Our activities are guided and measured by a set of specific objectives that are reviewed and refined annually. Several objectives are critical to the School’s success and are long-standing:

- Foster an academic environment of intellectual vitality that provides rewarding educational opportunities and innovative, impactful research
- Develop greater organizational effectiveness to maximize the impact of the resources we have
- Support the University’s diversity goals to enrich the lives of students and nurture the development of a workforce representative of the nation’s citizenry

In FY 2011, we will focus our efforts on the following objectives:

- Optimize enrollment among our programs while applications continue to rise
- Increase external funding supporting research and scholarship
- Provide innovative educational opportunities that distinguish the iSchool among our peers
- Provide state-of-the-art educational infrastructure to enhance student learning
- Enhance research productivity by encouraging multidisciplinary, collaborative projects.

Over the past five years, the School of Information Sciences has increased enrollment to provide greater financial stability, worked toward diversifying our faculty and students, and focused on contributing as

effectively and efficiently as possible to the missions of the University of Pittsburgh. As part of these efforts, we have:

- reorganized the School's governance structure to foster a more holistic perspective of the information professions among our faculty and students,
- offered academic programs online, serving a diverse set of students where they live and/or work,
- updated three core curricula in response to the expressed needs of industry and long term trends in the professions (BSIS, LIS, TeleNet), and
- reallocated resources to increase student enrollment, student satisfaction, and external funding.

We believe the steps we have taken over the past five years will serve to mitigate the impact of the current economic malaise on enrollments, the School's ability to garner external funding, and the career opportunities available to our graduates.

We have documented our progress on the School's goals and objectives, relating them to Pitt's goals, using the University's planning templates. Despite a challenging economic environment, we are particularly pleased to highlight the following significant accomplishments of FY 2010.

1. Several strategic faculty hires were made to support the School's evolution toward a more diverse and collaborative environment. These new faculty members will contribute greatly to the School's – and the University's – reputation for teaching and research within the Information Sciences.
2. Resources were reallocated to hire a post-doctoral researcher to assist in the development of collaborative research projects engaging multiple iSchool faculty. This effort included development of collaborative grant proposals submitted to federal agencies. The first post-doc (Kai-Florian Richter, working in the area of spatial information systems) departed in April 2010; faculty review of that experience was largely positive, affirming the commitment to recruit another post-doc to support collaborative research in FY 2011 (Mohd Anwar, working in the telecommunications and networking area).
3. A chief of staff / director of administration (Sandra Brandon) joined the SIS staff in a line that opened up with the retirement of Marsha Washington. Sandy brings abundant commercial experience in CIO and VP level positions with major national corporations to SIS.
4. Fundraising in FY 2010 has continued successfully, despite the national economic crisis. See the report from Marci Carothers, the School's Director of Constituent Relations for details.
5. We completed the School's transition from a self-supported, custom computer network to the University's campus-wide networking infrastructure supported by CSSD.

Looking forward to 2011, several key initiatives are particularly significant:

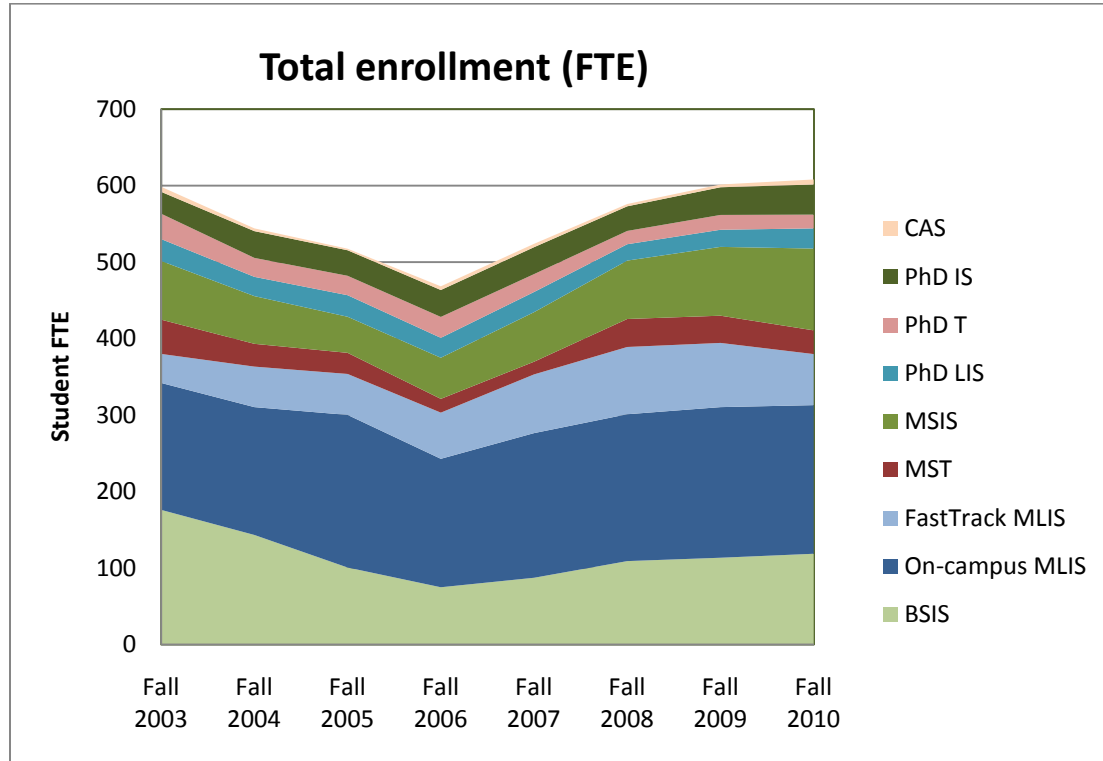
1. A new Certificate of Advanced Study (CAS) in Health Sciences Librarianship was recently launched, and faculty are considering the development of additional targeted CAS opportunities for working professionals to upgrade and update their professional education.
2. We are actively exploring ways to expand academic and research opportunities to develop signature areas of excellence for the School. For example, a doctoral seminar series entitled "Working Memory" began in Fall 2010, with the objective of spawning new research directions. Within a few weeks of publicly announcing the series, five PhD applications were received expressing specific interest in this area.

3. While the building's architecture continues to present challenges, we routinely work with Pitt's Facilities Management personnel to incrementally improve the building. The current focus is on refurbishing a traditional student computing lab in room 819 to support online learning, team-oriented educational projects, and alternative delivery methods. In FY 2011, the core infrastructural needs will be addressed: HVAC, networking, power, etc.
4. Launched by faculty needs assessments in 2010, we are evaluating the mechanical, computer, and human resources needed to support expansion of online education, incorporation of advanced learning technologies, and exploratory research in the Information Sciences.
5. With ten years of experience in online education through the MLIS FastTrack program, we believe it is time to conduct an external, independent assessment of the program. We have contracted with Karen Paulson of NCHEMS to assess the program, its processes, and outcomes.
6. With two faculty positions now open, we are recruiting for the Doreen E. Boyce Chair in Library and Information Science (endowed by the Buhl Foundation), and holding the second position pending an assessment of needs for an AY 2012 recruitment process. Faculty hiring is the primary mechanism by which the School pursues its vision of "One iSchool."
7. The dean and the chief of staff are developing a financial model that enables in-depth analysis of enrollment trends and projections, optimized use of limited financial aid resources, strategic deployment of teaching faculty, and increased discretionary resources available for support of the School's priorities.
8. Of particular interest to the Board of Visitors, the School is undertaking two critical assessment activities mandated by the University. First, each academic program is developing processes for routine assessment of learning outcomes and will begin to operationalize these processes. Second, the School will complete a programmatic assessment (self study) of the BSIS, MSIS, and TeleNet academic programs as part of the University's 10-year external review of academic programs and in support of the upcoming Middle States reaccreditation review. The LIS program meets the external review requirements by virtue of its 7-year re-accreditation by the American Library Association.

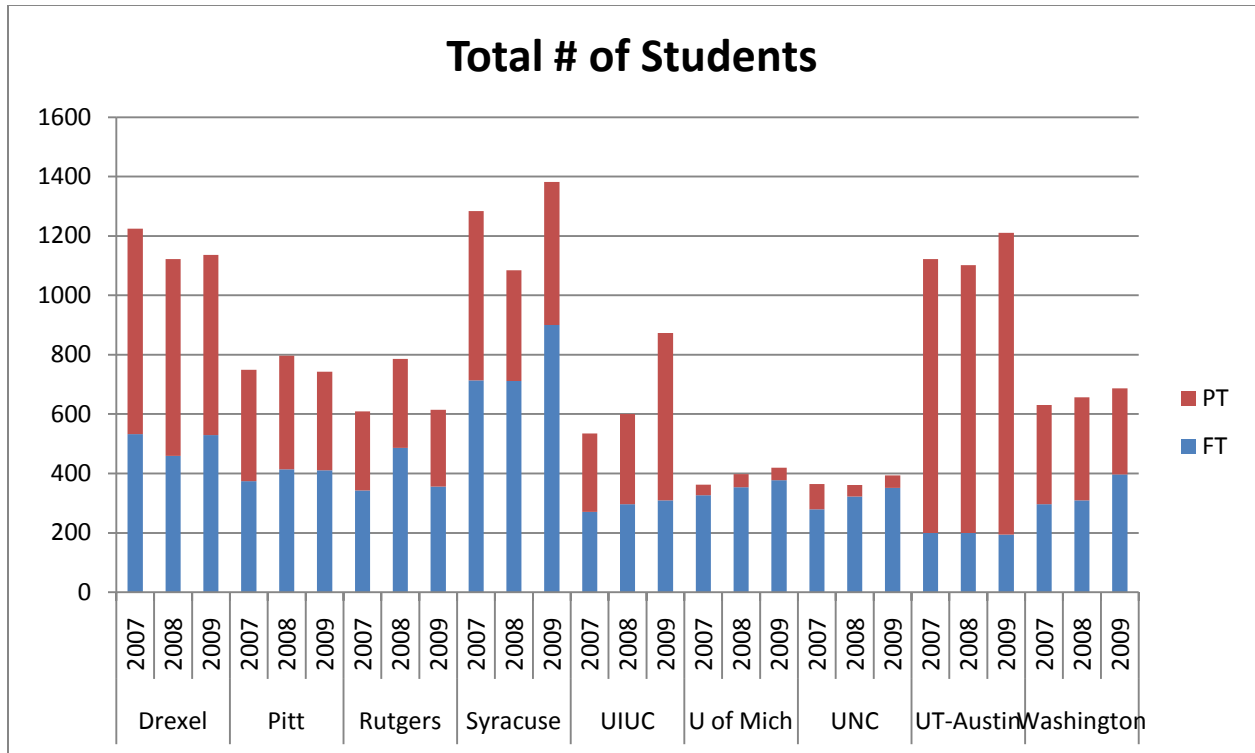
Benchmarking and FY 2011 Objectives

We continue to measure progress toward our goals both internally and externally. Internal measures incorporate year-to-year comparisons of key variables. External measures are based upon data provided to the Association of Library and Information Science Educators (ALISE), which can provide a reasonable (albeit a less than perfect) comparison with our peer educational institutions – a subset of members of the iSchool Caucus. Two years ago, the Computing Research Association expanded the Taulbee survey to include information schools as an identifiable category. As participation in this survey grows and the database matures, this will become an important additional source of benchmark data. As these are confirmed or corrected, we can provide an update to this analysis. The information below is organized according to our stated objectives to assess our progress in each of the critical areas. We also note how we intend to address our FY 2011 objectives in light of such internal and comparative data.

Optimize Enrollments



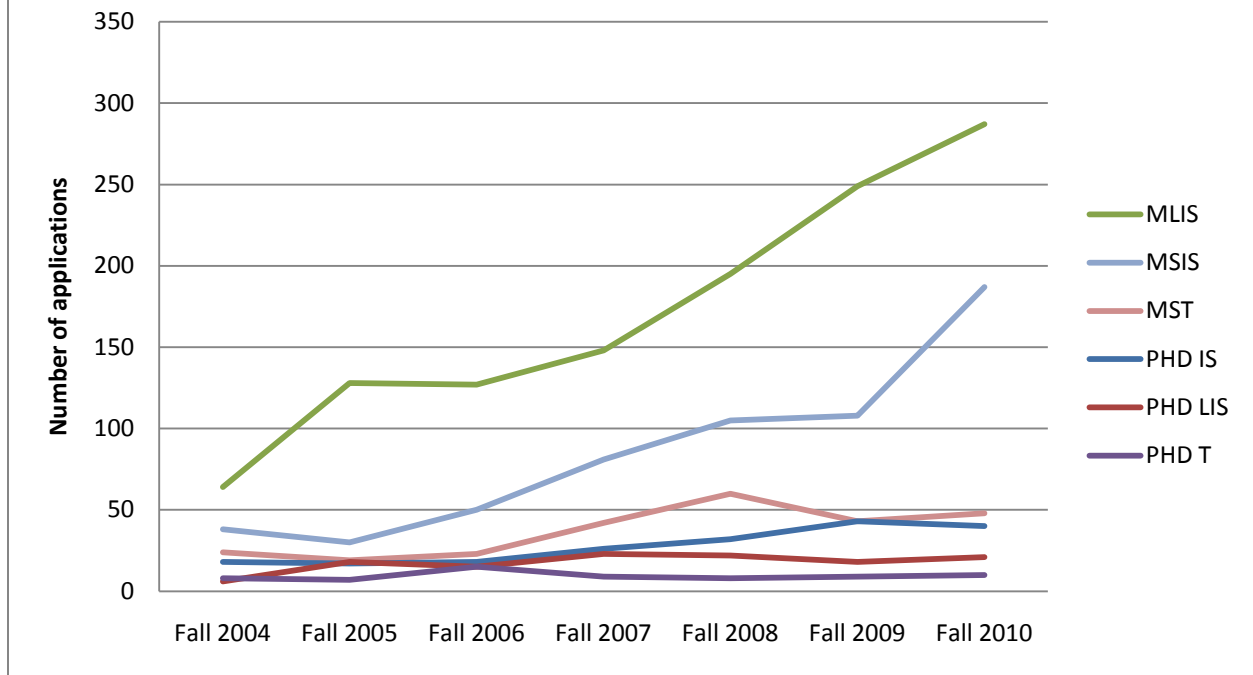
Our student FTE count increased from 576.08 (Fall 2008) to 601.6 (Fall 2009) to 608.2 (Fall 2010), while the headcount dropped from 812 to 805 to 802, reflecting a modest shift of students toward full-time study. While we see this as desirable for the School and a result we encouraged in our recruitment processes, evidence from our peer schools suggests this is not a trend experienced widely.



Syracuse, UIUC, and UT experienced significant increases in enrollment in 2009. In contrast to Pitt, their part-time student enrollment increased. Overall, enrollments for all of the schools (Pitt included) do not seem to be negatively impacted by the economic downturn at present, and may, in fact, be benefiting from it.

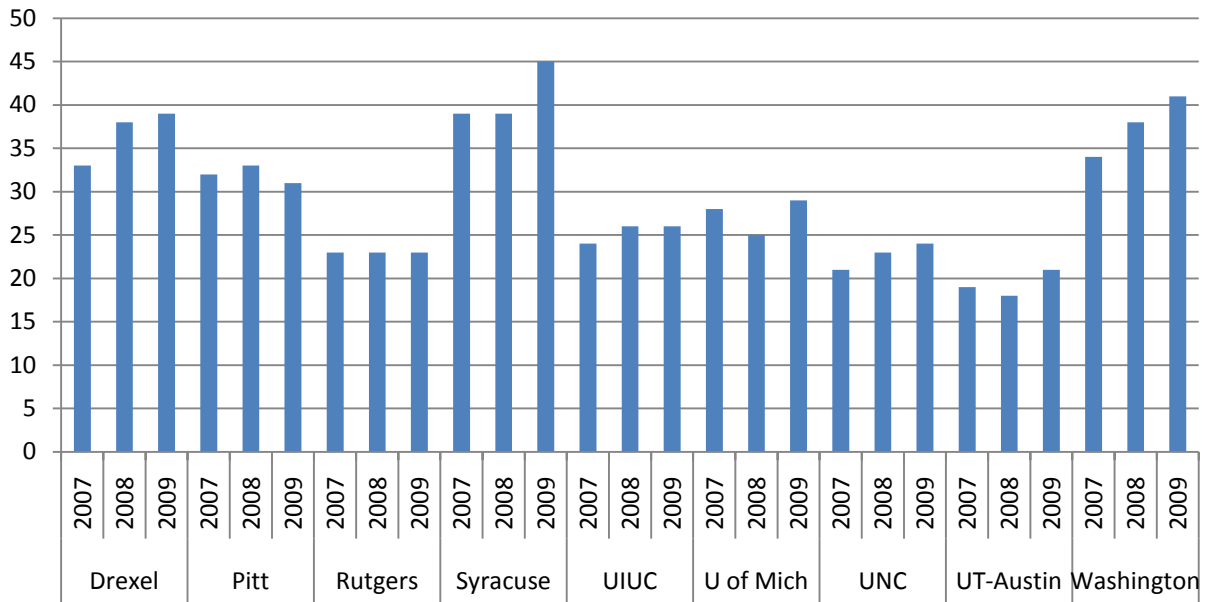
Our FY 2011 Plan identifies an opportunity for strategic optimization of enrollment, particularly within the LIS program, where we will encourage full-time study and actively recruit out-of-state students, thus generating more tuition revenue while lowering the student/faculty ratio.

Applications by grad. program (as of January 25 of the given year)

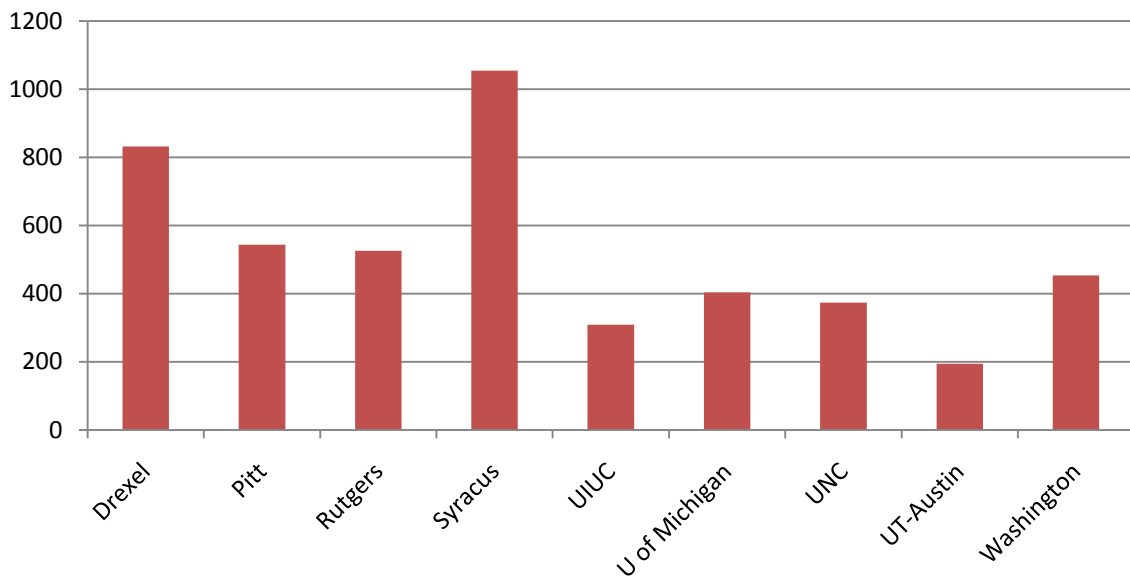


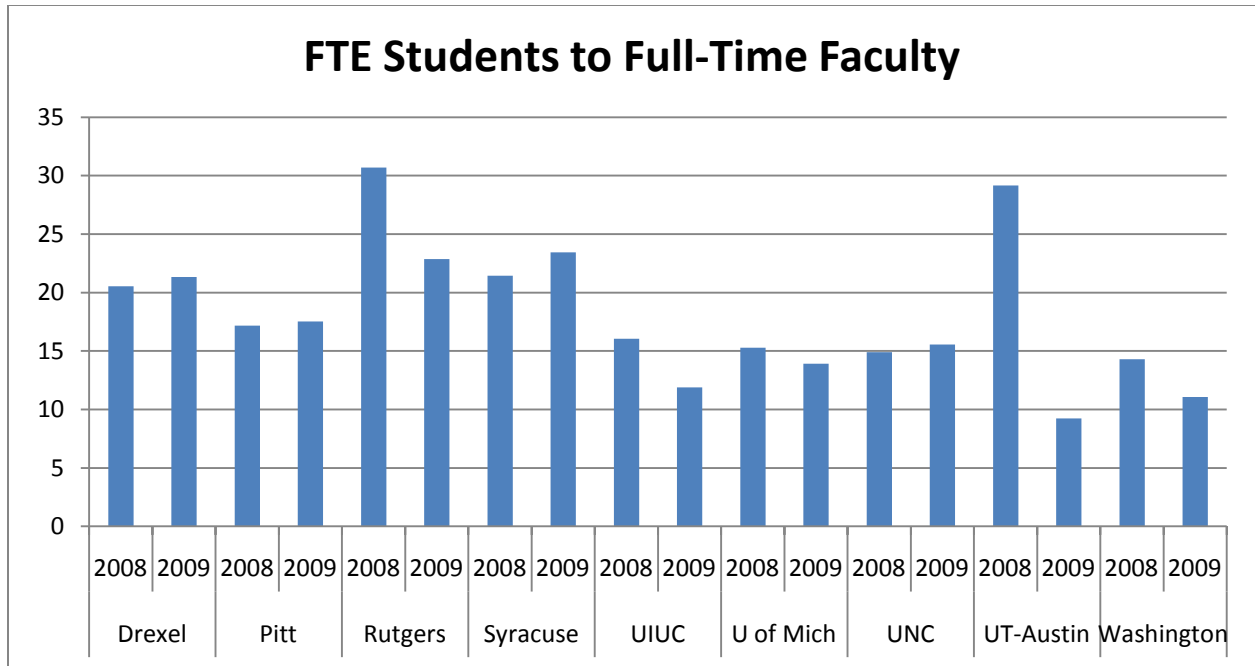
While increasing our student recruitment activities across the board, the School has placed particular emphasis on the Information Science programs (graduate and undergraduate). These programs were particularly hard hit following the dot-com bust of the early 2000s, and, now that they are recovering, provide an opportunity to balance our enrollments across the degree programs. As can be seen in the chart above, the program showing the largest growth in applications is the MSIS program, experiencing an increase greater than 70% over the past year. The MLIS program, while still drawing more applications, saw less of an increase than previous years. The School is closely watching application trends for the MLIS program in light of the economic downturn, with its news of closures, reduced hours, and staffing cuts in public libraries.

Total Number of Full-Time Faculty Members



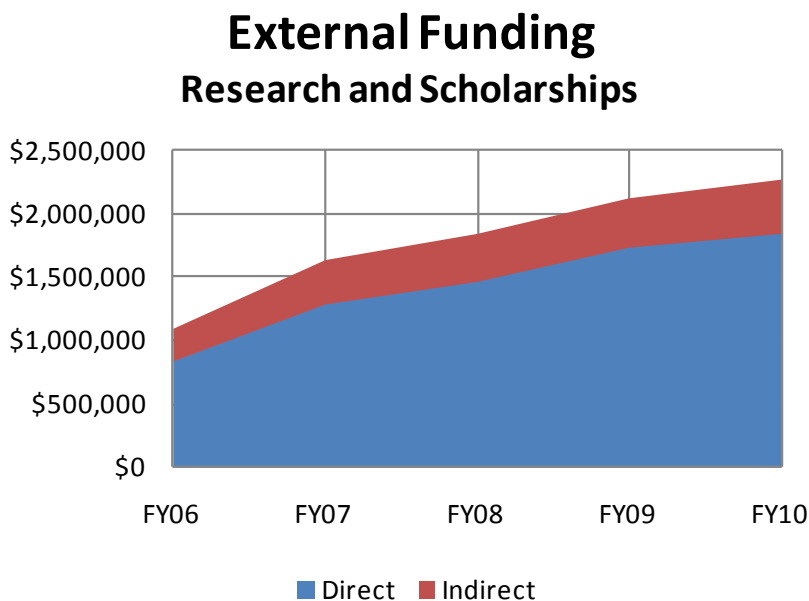
FTE Students



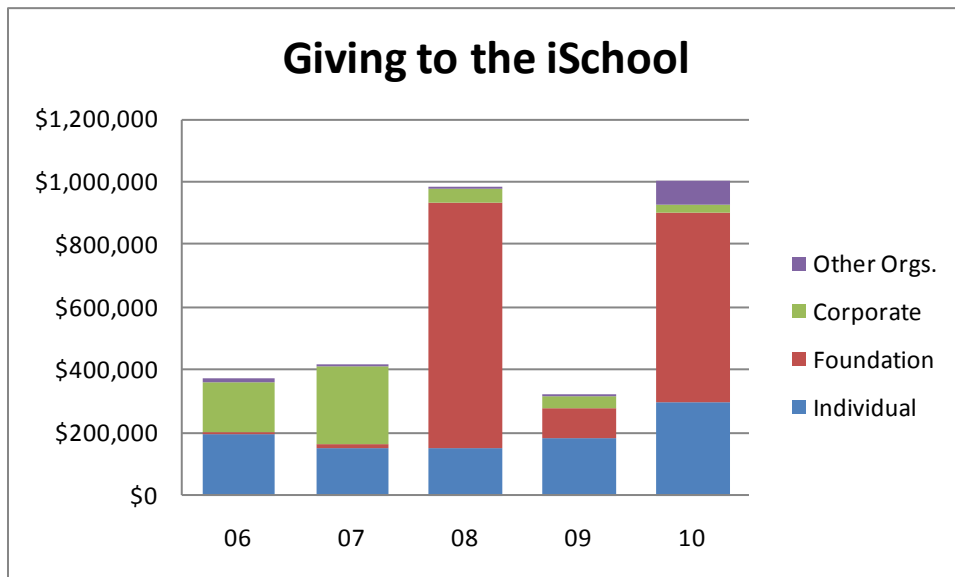


The above three graphs show the number of full time faculty, the number of FTE students, and the ratio of these for each of our peers for which we have recent data. The most relevant chart is the third one, for which Pitt is arguably positioned less favorably to our aspirational peers (UIUC, UM, UNC, and UW) and more favorably to some other iSchools (Drexel, Rutgers, Syracuse, and UT).

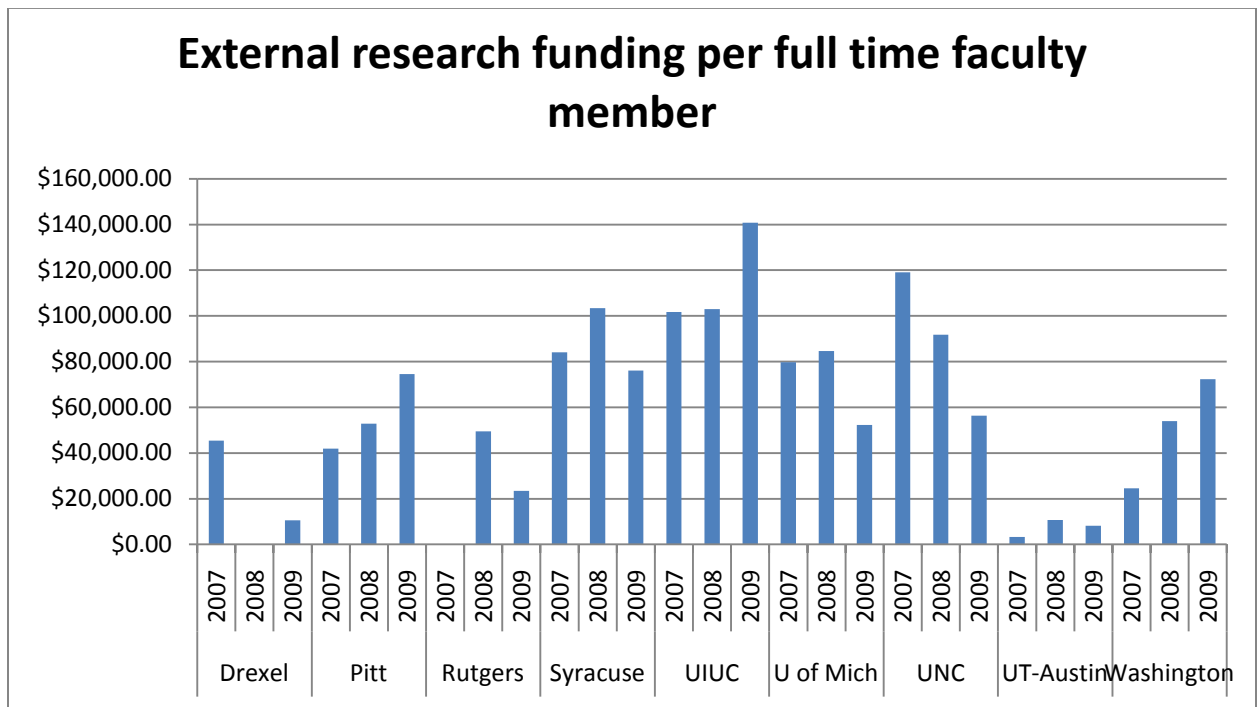
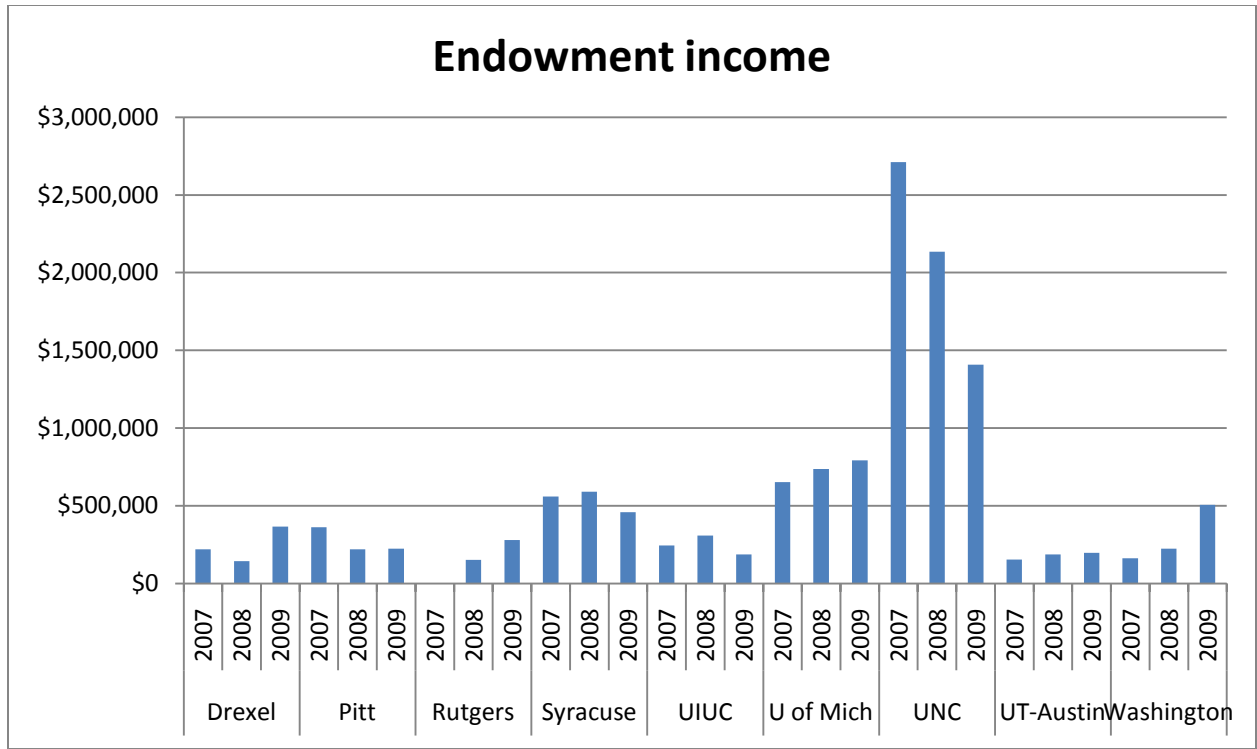
Increase External Funding



Over the last two years, the budgets of the National Science Foundation and the Department of Defense remained relatively flat. In spite of that, we saw small gains in our funding levels from those two agencies. In FY 2011, the budgets for NSF and DOD are expected to increase (NSF's by 8%). The School is well positioned to take advantage of the potential opportunities that will be available. We already have evidence of some success in the form of four new NSF EAGER grants received in August 2010. In contrast, while we have been exceptionally successful in attracting IMLS funding (supporting student scholarships for targeted MLIS programs at UVI and the Philadelphia Free Library), sustaining this level of support will be difficult from an agency that is relatively small and volatile in its funding priorities. We encountered a sharp decrease in IMLS funding this year as a result of completing two \$1M scholarship grants supporting minority MLIS students from the Virgin Islands and the Free Library of Philadelphia. We have also been successful in attracting significant IMLS funding for the Spectrum Scholars program (another diversity-related program, run in collaboration with the American Library Association), and, most recently, the online Health Sciences Librarianship CAS. The School will continue to seek IMLS funding as we create new academic programs or scholarship initiatives; in addition, the School will investigate other sources for such funding.



This chart illustrates our fundraising outcomes since 2006. Among the positive signs, our “Individual” giving is increasing each year since 2007 – and the total for FY 10 is up 67% from FY 09. We attribute this to a significant and consistent program of outreach to alumni championed by our Director of Constituent Relations (DCR), Marci Carothers and, previously, Joelleen Yerace. In 2008 through 2010, the “Foundation” column reflects two series of grants from the Andrew W. Mellon Foundation, both of which are project-oriented (the Cyberscholarship program and the iSchool Inclusion Institute).



At the School level, we select target areas to incentivize faculty and invest School resources, with the goal of creating signature areas of research to attract funding and PhD students. The School will sustain this as a priority, fostering particular research specializations where we have strength -- as we did for Information Assurance and Cyberscholarship. The faculty and administration carefully consider the long-term interests of the NSF and other federal agencies, emerging research directions, and needs expressed by industry. Where opportunities emerge, we strive to develop a cadre of faculty with appropriate interests, garner the essential resources, and promote the School's efforts to potential sponsors. Example areas where the School is building research and doctoral education include *Working Memory* (where a seminar series was introduced in Fall 2010) and *Values in Design* (a current seedling program).

Provide innovative educational opportunities

The BSIS program engages students in activity-centered learning experiences that provide them opportunities to develop knowledge and skills to position them competitively for both immediate employment and long-term career growth. The tenets of best practices in IT are actively incorporated into each exercise and course.

The graduate programs have focused on curricular refinement over the past two years and are now moving on to consider development and promotion of CAS opportunities. The CAS credit-hour requirement has been reduced for the new Health Sciences Librarianship CAS (from 24 to 15) to make it more attractive and accessible for practicing professionals. Additional CAS programs are anticipated around existing specializations within the Master's programs, allowing an efficient re-use of existing courses.

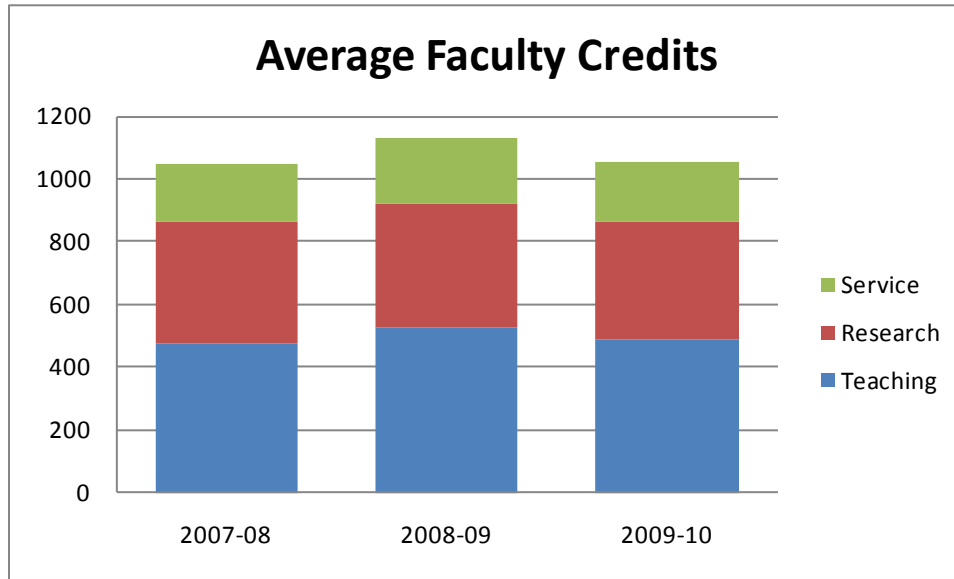
Provide state-of-the art instructional infrastructure

The 8th floor labs in the Information Sciences building will be renovated to better support both online and classroom education opportunities. While immediate investments will focus on basic infrastructure (HVAC, power, networking), the ultimate objective is to install flexible, adaptable configurations of furniture and equipment to enhance learning opportunities for all students.

Throughout the 10 years of the online FastTrack MLIS program, the School has routinely incorporated new technologies to improve effectiveness of education and efficiency of delivery – most recently, through a partnership with a CMU-sponsored start-up firm, with the introduction of the Panopto video instruction system. While immensely popular for classroom and colloquium dissemination, experience with the Panopto system has taught us to be not only appreciative of the technological opportunities, but also wary of the support requirements accompanying new technologies and the intellectual property implications associated with the video recordings. We look forward to the upcoming external review of the online programs in order to assure they deliver both pedagogical excellence and economic effectiveness.

Enhance research productivity

We continue to use a parametric model to monitor and assess faculty productivity in areas of research, instruction, and service. The model is calibrated around an expectation that a successful faculty member will accrue a mean value of 1000 credits per year, and that the School will aggregate these to achieve a net balance of 40% research, 40% instruction, and 20% service. The chart below reflects the School's contribution to these three critical areas, aggregated across all permanent faculty.



With the teaching load increasing with the growth in enrollments, we noted a decrease in research productivity in 2007-08 from the prior year. We took steps to address research productivity during 2008-09, with marginal success given the continuing increase in teaching. During the 2009-10 year, we were modestly successful at reducing teaching loads through team teaching and enhanced GSA support, but it still remains higher than we believe is healthy for a research active school. Research productivity during 2008-09 included:

- Publication of four books,
- Authoring 16 book chapters,
- Publication of 33 papers in scholarly journals,
- Delivery of 54 papers in peer reviewed conferences, and
- Service on 29 editorial boards.

In FY 2010, the School redirected research incentive funds (which had previously been distributed to a number of disparate research groups) to retain the services of a post-doctoral researcher. This endeavor had several goals:

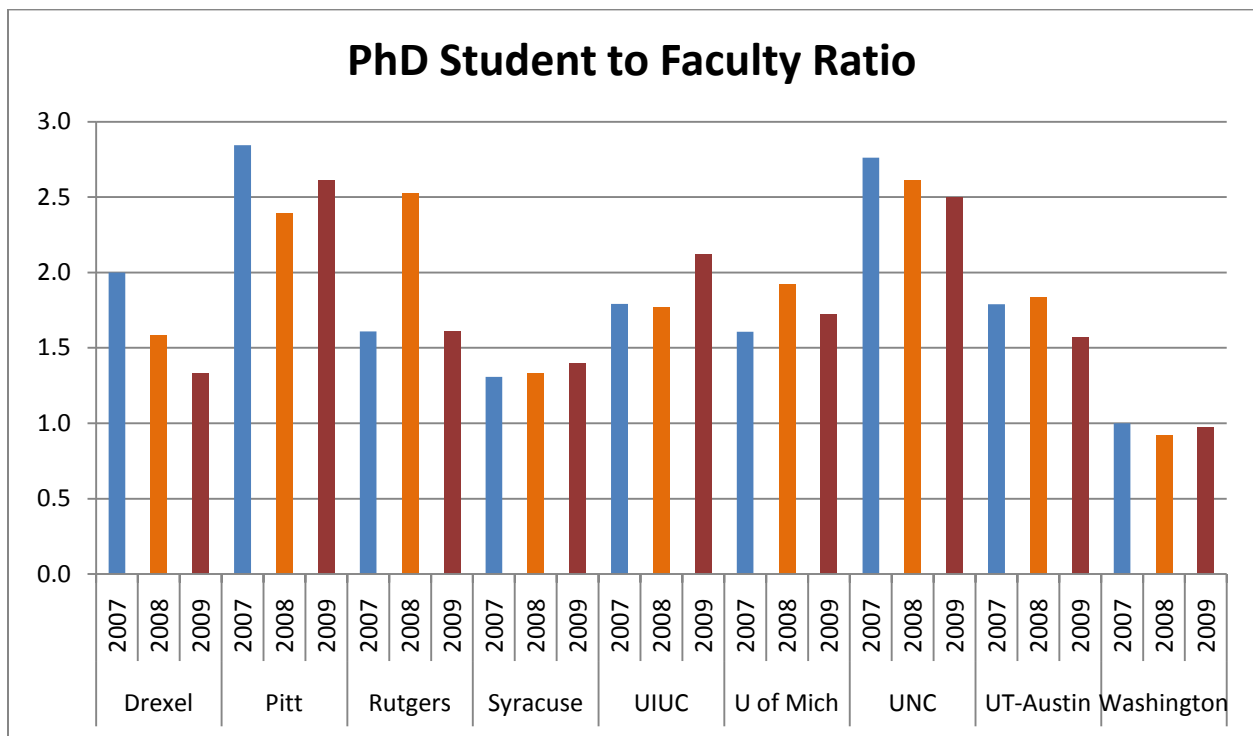
- to foster collaborative research efforts among faculty from different degree programs
- to facilitate co-publishing and writing of cooperative research grants
- to increase the likelihood for funding of large-scale, interdisciplinary projects.

Following an international search, the School brought in Dr. Kai-Florian Richter from the University of Bremen as the first collaborative research scholar, with the charge to foster development of collaborative research. His tenure at the school came to an end in April 2010. At that time, the faculty and administration assessed the effectiveness of the approach, revised the position description in light

of that evaluation, and recruited the next post-doctoral researcher (Mohd Anwar, a computer scientist from the University of Calgary). Informally, we note that the first year’s experience successfully engaged faculty from the Geoinformatics lab, the Spatial Information Science Research group, and several others interested in issues of information visualization. The outcome of this venture will be realized in the years to come; it is not a short-term effort.

Faculty research-related activity in the 2009-10 academic year included:

- Publication of one book,
- Authoring 15 book chapters,
- Publication of 37 papers in scholarly journals,
- Delivery of 74 papers in peer reviewed conferences, and
- Service on 25 editorial boards.



In FY 2010, the LIS program redirected much of its financial aid toward PhD students in order to expand the program’s research portfolio. This has met with limited success due to several factors: the desire to attract out-of-state students to professional Masters programs by making them cost-competitive with peers, the sheer volume of PhD students qualified for financial aid (as compared to the available external research funding available), and the time lag between offering admission with support to PhDs and their enrollment in the program (at times, students do not enroll but do not inform the school of their intentions in a timeframe that would allow reallocation of that funding to another student). The School’s administration is developing a financial model that will guide future efforts to allocate financial aid more strategically.

Develop greater organizational effectiveness

The SIS Council's agenda for the coming year includes an assessment of the effectiveness of the governance structure instituted four years ago, providing an opportunity to refine that structure.

The current position of "Director of Business Services" was re-scoped as a Chief of Staff, with the formal university designation of "Director of Administration." Through this higher-level position, following administrative advances in the Law School, Katz Business School, and School of Education, we seek to provide strategic administrative leadership and support for the Dean and the School.

The conversion of the pioneering (but custom and locally supported) network infrastructure to the (more recent) Pitt-standard, CSSD-supported network infrastructure will offer the opportunity for the School to reallocate its IT staff, focusing, in particular, on instructional and research support.

The University-mandated external assessment of all academic programs will provide an opportunity for the School to conduct a self-study of each of its programs; through this intensive effort, the School administration anticipates consideration of ways to support the academic programs more effectively.

Develop objectives, strategies and measures for iSchool experiential goals

During FY 2010, the SIS Council deliberated on learning objectives that define critical attributes of information professionals and that apply across the School's programs. This effort to clearly articulate and characterize the benefits of our academic programs will continue in FY 2011.

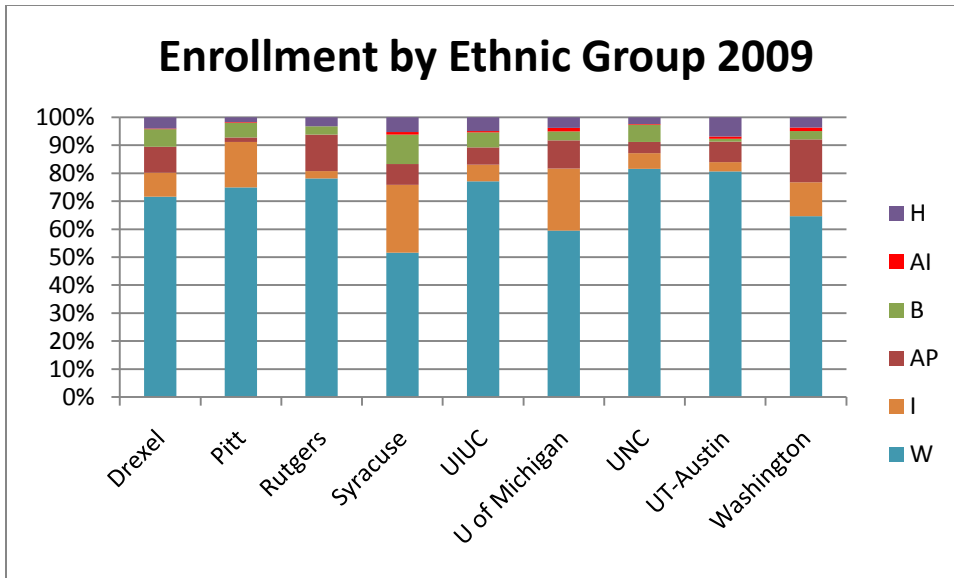
The current proposal for experiential goals for all iSchool students includes:

- Learn by doing, discover through exploration
- Develop an understanding of context
- Exercise technological proficiency
- Experience collaboration across disciplines

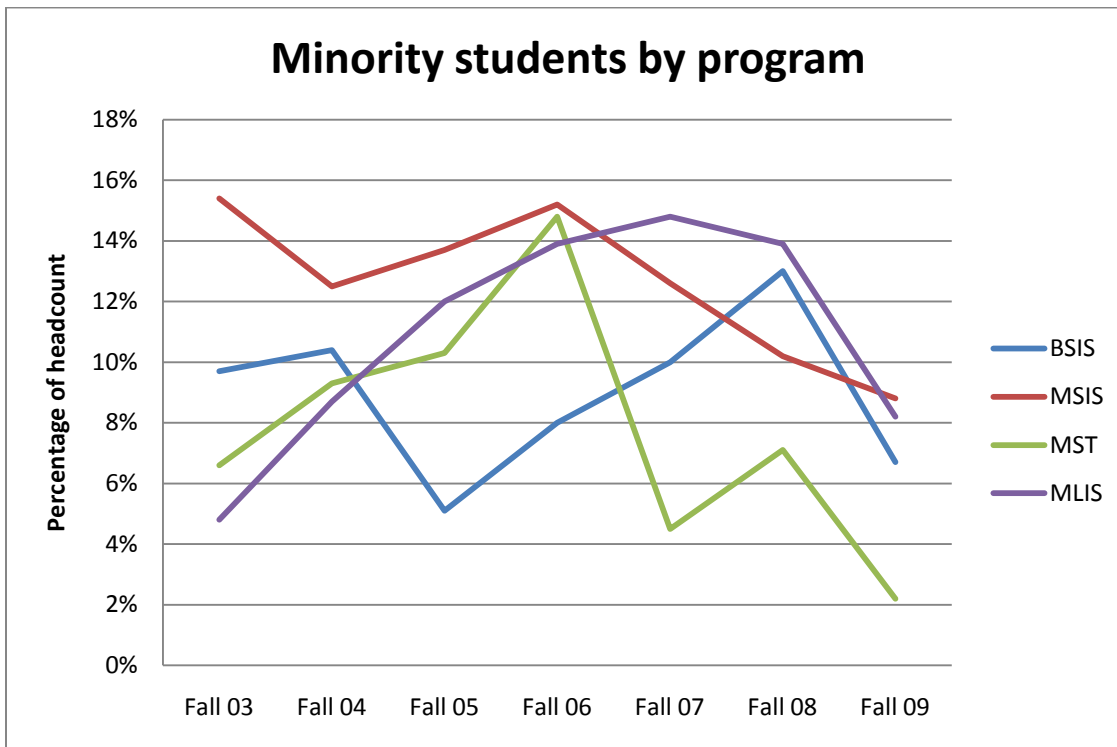
A student-developed e-portfolio was considered as a means of assessing learning outcomes. Legal and procedural issues regarding e-portfolios as an institutional vehicle for assessment have deferred adoption of this for the immediate future.

Support University Diversity Goals

When Dr. E. J. Josey was an active faculty member at the iSchool, his passion, commitment, and role-modeling attracted students of color to the School. Since his retirement (and recent death), it has become abundantly clear that a diverse student body requires a diverse faculty. None of the iSchools fare well with respect to diversity, as is apparent in the figure below.



Although the School increased its efforts to recruit students from under-represented segments of the population, the chart below shows a decrease in the percentage of diversity students enrolled at the iSchool. From 2006-2008, the School enrolled several special cohorts of under-represented students in the FastTrack MLIS program which had been underwritten with scholarships from the Institute of Museum and Library Services. These funded programs featured partnerships with the University of the Virgin Islands and the Philadelphia Free Library. In addition, the School played host to several Spectrum Scholars also funded by grants from the IMLS.



The School has been successful in securing outside funding to support recruitment and scholarships for under-represented students. In addition to the Commonwealth funds, the School was very pleased to discover that our corporate partners share our concern about the lack of diversity in both our academic programs and in their industries. Recently, Alcoa presented a grant to Pitt to support scholarships for under-represented students, including those in the School of Information Sciences. In addition, PPG Industries Foundation initiated a "Student Awards Program," to begin in Fall 2010. The program offers undergraduate students from underrepresented populations \$4000 scholarships per year. Individual funders have given to other diversity-related scholarships such as the EJ Josey Scholarship, a \$3000 scholarship for African American students, which is awarded annually. An IBM executive who is an alumna of the MSIS program also provided a recent gift of \$10,000 to be matched by IBM, providing an additional \$20,000 pool of scholarship funds intended to attract female MSIS students.

In January 2009, the Andrew W. Mellon Foundation awarded a \$100K planning grant to the School to support the development of an annual summer institutes program to attract and encourage undergraduates to pursue graduate study in the Information Sciences. In March 2010, the School submitted a \$600K proposal to the AW Mellon Foundation for funding to underwrite the program for its first three years (2011-2013). The grant was awarded in June. This project is designed to draw under-represented students into graduate study, encouraging those who demonstrate the greatest academic potential to pursue PhD degrees and become faculty members, thereby increasing the diversity of the faculty in the Information Sciences – resulting in a faculty that is more representative of the diversity of the country. Pitt's School of Information Sciences, as well as the other US-based iSchools, observes that increasing the faculty's diversity is essential to increasing the diversity among our students. We anticipate that this long-term program will become a significant emphasis for the School, its faculty and staff.

i³ Developing Faculty Diversity: *The iSchool Inclusion Initiative*

Like many academic disciplines, the Information Sciences have a paucity of faculty and students from underrepresented populations, particularly African-Americans and Latino-Americans. While the United States population is becoming increasingly diverse, the student population in the iSchools have not kept pace with this trend. In fact, our graduate student population is significantly less diverse than the student population in graduate programs in general.

In 2007, Hispanics living in the United States accounted for 15% percent of the U.S. population, while African-Americans account for 13.5%. It is estimated that by 2050, more than half of the US population will be from underrepresented groups (US Census). In 2008, African-American students enrolled at iSchools comprised only 7.2% of the whole student population, while Hispanic students comprised only 4.5%. African-American faculty at iSchools made up only 2.7% of the whole faculty population; Hispanic faculty made up only 2.3% (ALISE statistical reports). Clearly, the faculty and students at selected iSchools were significantly less diverse than the US population and the general population of students in graduate programs.

The lack of diversity in the faculty and student populations at iSchools has several deleterious effects:

- our faculty and our schools are not representative of the people we will serve in the information professions;
- people of color don't see role models for themselves within the Information Schools or the information professions;
- students of color don't consider the information professions to be a viable career option because they don't see people of color in the field; and
- the academic vitality and rigor of our institutions are diminished by the lack of diversity in our schools.

With this concern in mind, a coalition of three Pennsylvania iSchools -- the University of Pittsburgh, Drexel University, and Pennsylvania State University -- proposes to develop a series of annual summer institutes for promising undergraduates (rising juniors and seniors) from under-represented segments of the population who demonstrate the potential for success in graduate study. The primary goal is to attract participants to graduate programs in iSchools throughout the US. A related goal is to encourage the most promising students to continue their graduate studies to earn PhD degrees and, ultimately, join the faculty of an iSchool.

Description of Program

The approach to meeting the goals of the project are to

- Recruit 20 undergraduate sophomores to each cohort (3 cohorts in the pilot project) from throughout the US
Host a two-week introductory residential Summer Institute at the University of Pittsburgh to provide a comprehensive overview of the information professions, to introduce the nature of graduate study, and to engage in experiential activities to acquaint the participants with the work of an information professional
Define and facilitate a team project to be undertaken throughout the Junior year, supported by faculty mentors and social networking among the cohort
Host a two-week concluding residential Summer Institute between the junior and senior year, where the participants will present the results of their team project for critique, will develop a plan of graduate study, will be counseled on strategies for success, and will be recruited by iSchools in attendance.

Outcomes

- Sixty students will participate in the Institutes over the three years (2011, 2012, and 2013).
- At least 80% of the Institute students will complete the two Institutes and the research project.
- At least 60% of the Institute students will apply for graduate study at one of the iSchools. Our proposed goal would match the percentage of Mellon Mays Undergraduate Fellows (a highly-regarded diversity program) who enter graduate study, an achievement for those from underrepresented populations. (<http://www.mmuf.org/our-program>)

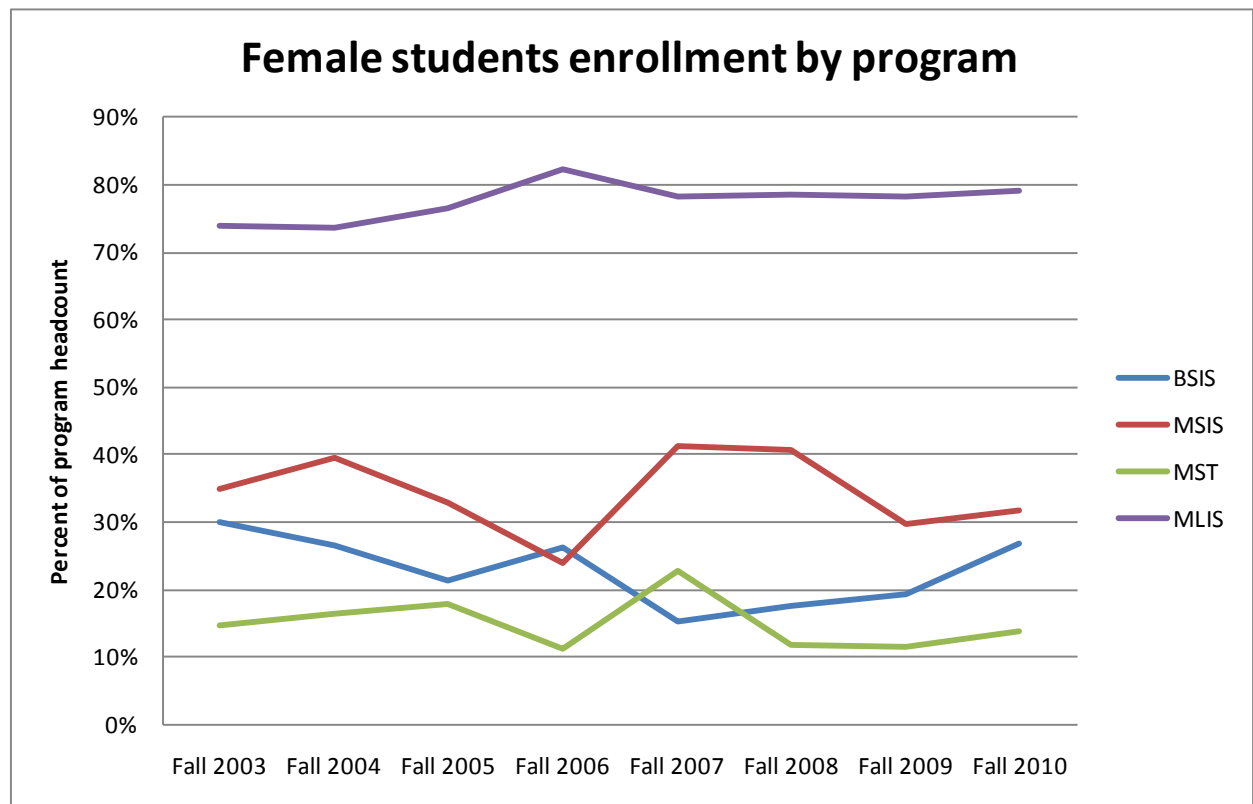
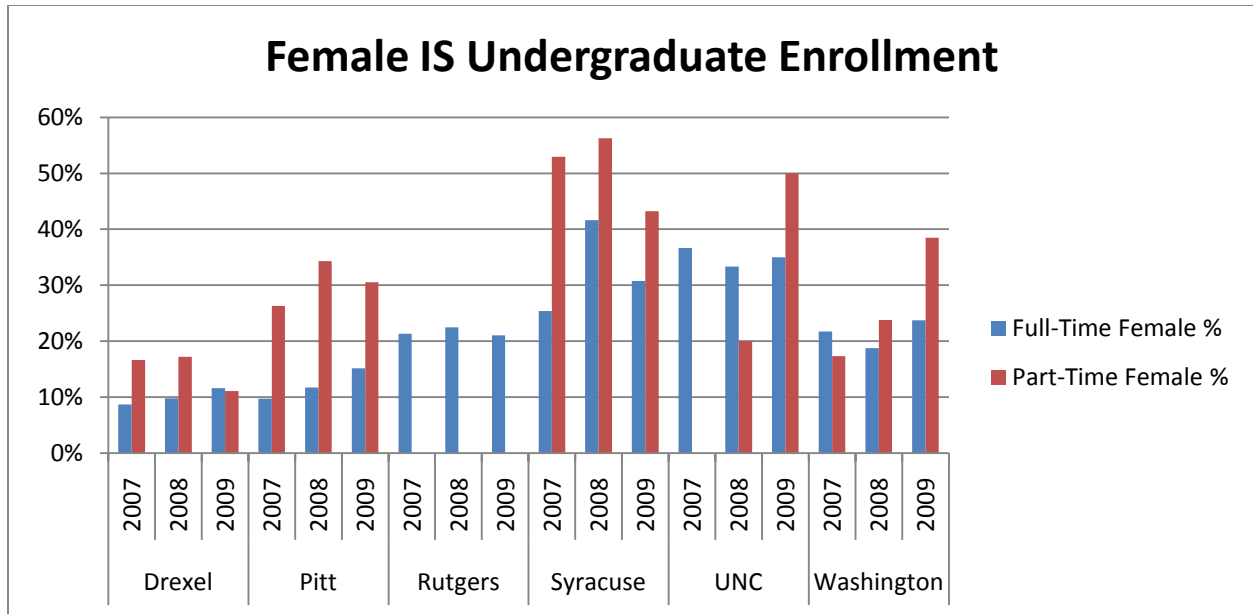
How can your iSchool participate?

- The project will need the expertise of faculty and admissions/career/diversity specialists to teach the workshops at the Summer Institutes.
- The project will need mentors for the team projects.
- iSchool representatives can attend portions of the Institutes to meet students and recruit them for graduate study at their home institutions.
- Consider offering incentives such as expedited admissions, scholarships, and other financial support to those who successfully complete the Summer Institutes program.

Contact Ronald L. Larsen, Dean of the School of Information Sciences at the University of Pittsburgh, at rlarsen@sis.pitt.edu.

A flyer explaining the iSchool Inclusion Initiative distributed at the 2010 iConference.

In FY 2011 and beyond, the School will continue to seek other partnerships/funding to support recruitment and enrollment of diversity students – a challenge in light of economic conditions.



It is also critical that the number of women enrolling in our Schools increase, particularly in the technology-related programs. This will add immeasurably to the intellectual vitality of the Schools and the disciplines. The industries we support are also calling for more female employees. One measure of

our success is the enrollment of women in the undergraduate program, signaling an increase in qualified candidates for graduate study or employment in the professions. The School has shown steady increases in the number of females enrolled in the Undergraduate program from 2007-2010, the results of concentrated marketing efforts to reach out to females. Our peer schools have seen mixed success in this effort: Drexel, Rutgers, and Syracuse all saw decreases in their female enrollments in 2009.

Corporate partners such as Alcoa enabled the School to offer scholarships to attract more women to the School at Pitt.