IR is More Than Just Data!

Dawn Geronimo Terkla
Executive Director, Institutional Research
IUQB Institutional Research Project Presentation
November 22, 2005
Objectives

- What is institutional research?
- How is institutional research organized in the United States?
- What functions are performed in IR offices?
- DATA
  - What data is used?
  - Who generates the data?
  - Who uses the data?
- How does IR support accreditation and quality assurance?
What is Institutional Research?

“Research conducted within an institution of higher education in order to provide information which supports planning, policy formation, and decision making” Saupe, 1982

"Broadly, 'institutional research' is viewed as a range of activities involving the collection, analysis and interpretation of information descriptive of an institution and its activities, including its students and staff, programs, management and operations. The findings of such 'institutional research' can assist institutional leaders (in both academic and administrative domains) through informing their planning and decision making." Zimmer, 1995
What is Institutional Research?

- “An activity having to do with what decision makers need to know about an institution, its educational objectives and goals, and to demonstrate integrity and accountability in so doing” Dressell, 1981

- “Institutional research is the sum total of all activities directed at describing the full spectrum of functions (educational, administrative, and support) occurring within a college or university. Institutional research activities examine those functions in their broadest definitions, and embrace data collection and analytic studies in support of decision-making at the institution.” Middaugh, Trusheim, & Bauer, 1994
“...responsible for providing the university management with information that supports institutional planning, policy formation and decision making; for coordinating responses to inquiries for university-related information and serving as a comprehensive source for information about the institution; and for administering the Board of Governors data collection/reporting system on campus.” University of Florida

“...provides management information and analytical support to University decision makers. The Office serves as a major repository for information on enrollment, faculty teaching loads, faculty characteristics, courses, semester credit hour production, degrees awarded, and facilities utilization, and is charged with analyzing and interpreting these data for use in planning and policy decisions. It has a major role in providing statistical data to the Provost and Deans for their annual strategic planning process, known as Compact, and for the Performance Based Instructional System (PBIS). The Office also has a major responsibility for compiling and filing reports required by the Texas Higher Education Coordinating Board, the U.S. Department of Education, and other state and federal agencies.” U. of Texas, Austin

Office of Institutional Research, January 06
An Institutional Research Ecology

- Relatively Small
  - Structure (one person)
  - Elaborate Profusion
- Relatively Large
  - Small Adhocracy (2-3 person)
  - Professional Bureaucracy (4+ staff)

Source: J. Fredericks Volkwein, NEAIR 2005
Office of Institutional Research, January 06
IR Organized by Function
Most Common arrangement

Director of Planning and IR

External & Internal Reporting
- Guidebooks
  IPEDS, NCAA
- Official Numbers to System, State and Federal Agencies
- Accountability Reporting

Planning & Special Projects
- Decision Support Studies
- Benchmarking
- Enrollment Projections
- Revenue Projections

Data Management & Technical Support
- Student Database
- Personnel Database
- Financial Database
- Data Warehouse
- Hardware and Software Support

Research and Development
- Outcomes Assessment
- Survey Research
- Campus Climate Research
- Institutional Effectiveness
- Alumni Studies

Source: J. Fredericks Volkwein, NEAIR 2005
Office of Institutional Research, January 06
Offices engaged in a wide range of activities

- Provide information to university decision makers
- Respond to requests for institutional data from internal & external sources (state, federal, peer institutions, private publishers)
- Serve as a repository of data
- Support development, analysis and evaluation of policies & plans
- Provide analytical & research support
- Assist personnel in other units with research & assessment methodology, evaluation, and analysis
- Conduct on-going qualitative & quantitative studies
- Develop & maintain a cycle of regular institutional studies
- Ensure the integrity of the data
- Assist with accreditation self-study & site visit
- Benchmark on relevant indicators
- Perform other duties as requested by administration & faculty
Tufts Office of Institutional Research

- Provides information to senior administrators
- Serves as a research resource to the University community
- Consults on survey construction, as well as, design & execute projects
- Completes program evaluations, marketing research & outcomes assessments
- Produces the University Fact Book & oversee completion of various external reports
- Coordinates University responses to external bodies
Staff Composition

- Executive Director
- Assistant Director
- 3 Research Analysts
- Institutional Research Coordinator
- Undergraduate and Graduate Research Assistants
DATA: What is used? Who generates it? Who uses it?

- **Institutional Data**
  - Databases – student information, human resources, financial systems
  - Original data collection – surveys, interviews & focus groups

- **Data from governmental sources**
  - National Center for Educational Statistics
  - National Science Foundation
  - National Institute of Health
  - National Longitudinal Survey --

- **National Data Collection Efforts**
  - CIRP – Survey of Freshmen
  - HERI – Faculty Surveys
  - NSEE – Student Engagement
  - AAUP – Faculty Salaries
  - CUPA – Higher Ed Salaries
  - CFAE - Fundraising

- **Peer Data**
  - Consortium sharing

- **Published Guidebooks**
  - US News & World Report
  - College Board
  - Peterson’s
Example 1: Tufts Dashboard

Tufts University Dashboard Winter 2004/2005

Example 1: Tufts Dashboard

Office of Institutional Research, January 06
Example 2: Tufts Peer Dashboard

Tufts University Dashboard Including Peers November 2005

Peer Institutions

BOSTON COLLEGE
BROWN UNIVERSITY
COLUMBIA UNIVERSITY
CORNELL UNIVERSITY
DARTMOUTH COLLEGE
DUKE UNIVERSITY

GEORGETOWN UNIVERSITY
JOHNS HOPKINS UNIVERSITY
NORTHWESTERN UNIVERSITY
UNIVERSITY OF PENNSYLVANIA
WASHINGTON UNIVERSITY IN ST LOUIS

Undergraduate Admissions

Undergraduate Acceptance Rate

<table>
<thead>
<tr>
<th>Institution</th>
<th>Probability</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUFTS</td>
<td>28%</td>
<td>23%</td>
</tr>
<tr>
<td>IPEDS 2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NORTHWESTERN U</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>COLUMBIA U</td>
<td>13%</td>
<td></td>
</tr>
</tbody>
</table>

Undergraduate Yield

<table>
<thead>
<tr>
<th>Institution</th>
<th>Probability</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUFTS</td>
<td>37%</td>
<td>32%</td>
</tr>
<tr>
<td>IPEDS 2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U OF PENNSYLVANIA</td>
<td>63%</td>
<td></td>
</tr>
<tr>
<td>BOSTON COLLEGE</td>
<td>32%</td>
<td></td>
</tr>
</tbody>
</table>

Tufts Current Value

- Tufts highest value for past 6 yrs: 50%
- Tufts lowest value for past 6 yrs: 33%
- Change from previous year: 45%

Tufts place in peer rank order

- Highest ranked peer name: COLUMBIA U
- Lowest ranked peer name: BROWN U

Peer Data Source & Year

- TUFTS
- IPEDS 2004

SAT I Verbal 25th percentile score

<table>
<thead>
<tr>
<th>Institution</th>
<th>Score</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUFTS</td>
<td>640</td>
<td></td>
</tr>
<tr>
<td>IPEDS 2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DARTMOUTH COLLEGE</td>
<td>670</td>
<td>9/12</td>
</tr>
<tr>
<td>BOSTON COLLEGE</td>
<td>610</td>
<td></td>
</tr>
</tbody>
</table>

SAT I Math 25th percentile score

<table>
<thead>
<tr>
<th>Institution</th>
<th>Score</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUFTS</td>
<td>650</td>
<td></td>
</tr>
<tr>
<td>IPEDS 2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WASHINGTON U</td>
<td>690</td>
<td>10/12</td>
</tr>
<tr>
<td>BOSTON COLLEGE</td>
<td>630</td>
<td></td>
</tr>
</tbody>
</table>

SAT I Verbal 75th percentile score

<table>
<thead>
<tr>
<th>Institution</th>
<th>Score</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUFTS</td>
<td>730</td>
<td></td>
</tr>
<tr>
<td>IPEDS 2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DARTMOUTH COLLEGE</td>
<td>760</td>
<td>10/12</td>
</tr>
<tr>
<td>BOSTON COLLEGE</td>
<td>710</td>
<td></td>
</tr>
</tbody>
</table>

SAT I Math 75th percentile score

<table>
<thead>
<tr>
<th>Institution</th>
<th>Score</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUFTS</td>
<td>740</td>
<td></td>
</tr>
<tr>
<td>IPEDS 2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WASHINGTON U</td>
<td>780</td>
<td>10/12</td>
</tr>
<tr>
<td>BOSTON COLLEGE</td>
<td>710</td>
<td></td>
</tr>
</tbody>
</table>

Office of Institutional Research, January 06
### Faculty Salary Comparisons

<table>
<thead>
<tr>
<th>Year</th>
<th>Professor</th>
<th>Associate Professor</th>
<th>Assistant Professor</th>
<th>Lecturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>$103,423</td>
<td>$84,509</td>
<td>$61,978</td>
<td>$50,997</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>$196,277</td>
<td>$90,400</td>
<td>$87,145</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>$49,000</td>
<td>$54,500</td>
<td>$53,830</td>
</tr>
</tbody>
</table>

#### Undergrad. Class Size, 1999-2002

- **Average Undergrad. Class Size, 1999-2002**
- **Undergrad. Enrollment per Class Size, Average, 1999-2002**
- **Grant Expenditures per Faculty, FY02-FY03**

#### Course Load, 2002-2003

- **Average Number of Seminars/Lectures Taught 2002-2003**
- **# Students in Independent Study/Research**

#### Undergrad. Advising Load, 2002-2003

1. Peer comparisons for Faculty Salaries: Boston University, Brown University, Case Western University, Emory University, George Washington University, Massachusetts Institute of Tech, Northeastern University, Stanford University, Vanderbilt University, Worcester Polytechnic Institute
2. FT = Full-time Tenured; FTT = Full-time Tenure Track; FNTT = Full-time Non-tenure Track; PT = Part-time

---

### Example 3

---

---

<table>
<thead>
<tr>
<th>University</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia University</td>
<td>4.6</td>
</tr>
<tr>
<td>Cornell University</td>
<td>4.6</td>
</tr>
<tr>
<td>Duke University</td>
<td>4.6</td>
</tr>
<tr>
<td>Johns Hopkins University</td>
<td>4.6</td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td>4.5</td>
</tr>
<tr>
<td>Brown University</td>
<td>4.4</td>
</tr>
<tr>
<td>Dartmouth College</td>
<td>4.4</td>
</tr>
<tr>
<td>Northwestern University</td>
<td>4.4</td>
</tr>
<tr>
<td>Washington University in St. Louis</td>
<td>4.1</td>
</tr>
<tr>
<td>Georgetown University</td>
<td>4.0</td>
</tr>
<tr>
<td>TUFTS UNIVERSITY</td>
<td>3.6</td>
</tr>
<tr>
<td>Boston College</td>
<td>3.5</td>
</tr>
<tr>
<td>Tufts Rank</td>
<td>11th</td>
</tr>
</tbody>
</table>

*Office of Institutional Research, January 06*
Example 5: Undergraduate Satisfaction with Social Life

% Satisfied or Very Satisfied with Social Life on Campus

Office of Institutional Research, January 06
Example 6: TCSVM Outcomes
Assessment Skills & Competencies

- Most important aspects of formal training:
  - Problem solving & critical thinking
  - Diagnosis & treatment of disease
  - Ability to communicate effectively & empathetically
  - Clinical skills
  - Oral communication skills
  - Patient rapport & handling skills
  - Anesthesiology & pain management

<table>
<thead>
<tr>
<th></th>
<th>Employer</th>
<th>Exiting</th>
<th>Alumni</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem solving and critical thinking</td>
<td>2.74</td>
<td>2.79</td>
<td>2.83</td>
</tr>
<tr>
<td>Ability to communicate effectively and empathetically with clients</td>
<td>2.71</td>
<td>2.56</td>
<td>2.57</td>
</tr>
<tr>
<td>Diagnosis and treatment of disease</td>
<td>2.71</td>
<td>2.90</td>
<td>2.84</td>
</tr>
<tr>
<td>Clinical skills</td>
<td>2.63</td>
<td>2.81</td>
<td>2.78</td>
</tr>
<tr>
<td>Oral communication skills</td>
<td>2.63</td>
<td>2.71</td>
<td>2.65</td>
</tr>
<tr>
<td>Patient rapport and handling skills</td>
<td>2.55</td>
<td>2.73</td>
<td>2.70</td>
</tr>
<tr>
<td>Anesthesiology &amp; pain management</td>
<td>2.50</td>
<td>2.68</td>
<td>2.66</td>
</tr>
</tbody>
</table>
Example 7: Tufts University School of Medicine (TUSM) Alumni Survey

*TUSM Would Benefit from an overall strategic plan to guide it for the next several years.*

- Strongly Agree, 70%
- Agree, 27%
- Neutral, 3%

Office of Institutional Research, January 06
Institutional Research & Accreditation

- Provides support to the self-study working groups/committees
- Provides support with institutional planning, evaluation, and assessment efforts
- Provides support in identifying and assessing institutional effectiveness measures
- Completes annual report
- Completes CIHE Data Forms, required to be submitted with the self-study
  - 5 years of data regarding enrollment, degrees awarded, faculty, and finances
Executive Director serves as Liaison Officer
Executive Director co-chaired Self-Study Steering Committee
Executive Director wrote the 5-year mid-evaluation report
Tufts Office of Institutional Research Staff

Tom
Research Analyst

Dawn
Director

Lisa
Research Analyst

Heather
Assistant Director

Jessica
Research Analyst

Susan
Coordinator

Research Assistants