



Newcomers to IR in Maryland

Practical Tips for Navigating
the Maryland IR Maze



Introductions

- ❖ Workshop leaders
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- ❖ Workshop participants



Today's Topics

- ❖ What is IR?
- ❖ IR Within the Institution
- ❖ Maryland Higher Ed and IR
- ❖ IR's Alphabet Soup
- ❖ Roles
- ❖ Tips for Success
- ❖ Resources



What IS Institutional Research?

- ❖ The art of providing higher education decision makers with bad answers to support questions which they will otherwise address using foregone conclusions or untested hypotheses.
~ Harold Richard
- ❖ A profession occupying a very precious space between spineless administrators and mindless academicians.
~ James Dator
- ❖ Higher Education's Central Intelligence Agency.
~ Stuart Rich
- ❖ Whatever [my president] wants.
~ Robin Shores



What IS Institutional Research

❖ Research leading to improved understanding, planning, and operating of institutions of postsecondary education.

~ Association for Institutional Research

❖ Fosters and assists institutional change.

~ Marvin Peterson



What IS Institutional Research

Purposes and Audiences

Organizational Role & Culture

Formative & Internal
For Improvement

Summative & External
For Accountability

Administrative
& Institutional

To describe the institution
IR as Information Authority

To present the best case
IR as Spin Doctor

Academic &
Professional

To analyze alternatives
IR as Policy Analyst

To supply impartial
evidence of effectiveness
IR as Scholar and Researcher



IR Structures within Institutions

- ❖ No one correct model
- ❖ Often defined by reporting structure
 - Academic Dean or Provost
 - Administrative Vice President / Budget
 - Direct line to President
 - Others
- ❖ Varying areas of focus, including:
 - Enrollment management
 - Planning, institutional assessment
 - External reporting or marketing



Higher Ed and IR in Maryland



Academe's Alphabet Soup

- ❖ Federal Acronyms – IPEDS, NCES, WIA, NSF, NPEC
- ❖ IR Related Professional Associations – AIR, NEAIR, SAIR, NCRP, SCUP, ASHE, AAHE
- ❖ Other National Associations – AACCC, AAU, NSLGUC, SHEEO, NACUBO, AAUP, AACRAO, ...
- ❖ Consortia – AAUDE, HEDS, COFHE



Maryland's Alphabet Soup

- ❖ Higher Ed – MHEC, USM, MACC, MCCCRG
- ❖ State Agencies
 - DLLR – Department of Labor, Licensing, Regulation
 - DBED – Department of Business and Economic Development
 - MSDE – Maryland State Department of Education
 - MOP – Maryland Office of Planning
 - GWIB – Governor's Workforce Investment Board



Roles and Responsibilities

- ❖ Keepers of the Data – Consistency, Integrity, Quality
- ❖ Mandatory Reporting – External and Internal
- ❖ Tracking Student Progress – Retention, Graduation, Longitudinal Tracking
- ❖ Surveys, Focus Groups
- ❖ Enrollment Management & Projection
- ❖ Strategic Planning
- ❖ Assessment – Institutional, Learning Outcomes



Data Extraction

- ❖ Standard reports (usually developed by IT in consultation with IR) for distribution to a large audience
 - Distribute to those who need to know
 - Consider appropriate audiences
- ❖ “Frozen” files
 - Be cognizant of important dates
 - Understand that “current” is not always best
- ❖ Befriend the “IT guys”



Common “Frozen” Files

- ❖ Applicant files
- ❖ Unduplicated student files
 - Demographics (ex. age, ethnicity, address)
 - Semester registration and other academic information
 - Program, student level, credits attempted, GPA
- ❖ Course enrollment detail files
 - All registrations, updated with grades
- ❖ End of term performance files
 - GPA, academic actions, academic awards
- ❖ Degrees awarded
- ❖ Personnel files
 - Gender, ethnicity, EEO code, tenure status, salary, benefits



Principles of Data Consistency

- ❖ Develop and employ clear data definitions
 - Develop a set/glossary/library of data definitions
 - Keep records of the decisions and their implementation
 - Be able to provide a clear rationale for what you do
- ❖ Question past practice
 - Resist - “that’s the way we have always done it” and “that’s the way Joe did it” traps
- ❖ Develop protocols and follow them



Principles of Data Integrity

- ❖ Edit check and re-check
- ❖ Sample the data
- ❖ Befriend the “owners” of the data
 - Explanations of context, quality
 - Review and re-entry of edits
- ❖ Look for and recognize patterns
 - The “Gee, that’s strange” clues



Ensuring Data Quality

- ❖ Make comparisons with known standards and/or other institutions/groups
- ❖ Examine various measures of central tendency
- ❖ Examine various measures of variability
- ❖ Employ a “5 point” data summary
- ❖ Examine and explore outliers
- ❖ Consider the appropriate level of precision needed
- ❖ Strike an appropriate balance between “cost and benefit”



External Reporting

- ❖ IPEDS
- ❖ State Specific Reports (MHEC, USM, MACC)
 - Enrollment, accountability, financial, capital
- ❖ Middle States compliance
 - Annual Institutional Profile, PRR, Self Study
- ❖ CDS and Publications



IPEDS

- ❖ The core postsecondary education data collection program for NCES
- ❖ Designed to collect data from ALL institutions whose primary purpose is to provide postsecondary education
- ❖ A comprehensive system of interrelated surveys to collect institution-level data



IPEDS Surveys

9 Components

- ❖ General Information
 - Institutional Characteristics
- ❖ Student Surveys
 - Enrollment
 - Completions
 - Graduation Rates
 - Student Financial Aid
- ❖ Resource Surveys
 - Employees by Assigned Positions
 - Fall Staff
 - Salaries
 - Finance



MHEC Reporting

- ❖ Data Files – Unit Record Data
 - HGS – Recent High School Graduates
 - EIS – Fall Enrollment (All Enrolled for Credit)
 - EDS – Employee Data (as of November 1)
 - DIS – Fiscal Year Graduate Data
 - TSS – Fiscal Year CC graduate data (4 yr public only)
- ❖ Keyed by SSN, used in MHEC longitudinal reports on retention, graduation, etc.



MHEC Reporting, cont'd

❖ Annual Reports

- Accountability/MFR, Opening Fall Enrollment, Financial Aid (soon to be unit record data file), ESOL, Facilities, Budget/Finance, Enrollment/FTE, Enrollment Projections

❖ Other Reports

- Minority Achievement, Student Learning Outcomes Assessment Report (SLOAR), Mission Statement



Internal Reporting

- ❖ Advises decision makers – helps inform policy
- ❖ Standard reporting schedule plus timely and ad hoc reports
- ❖ Surveys, cohort studies play key role
- ❖ Analyses on multiple levels – institutional, college, program



Internal ,Standardized Reports

- ❖ Movement from paper to electronic
- ❖ Tiered system of access to information
- ❖ Routine reporting process, schedule
 - Start simple, make it better each year
- ❖ Goals
 - Efficiency – eliminate need for simple requests
 - Proactive – anticipate user needs
 - Useful – become the “first source” for information
 - Consistency – ensure similar story regardless of teller



Typical Internal Reports

- ❖ Fact Books or similar web sites
- ❖ Enrollment Reports
 - Students, seats, FTEs
 - Split by student or course characteristics
- ❖ Faculty Workload
- ❖ Finance / Budget related
- ❖ Student financial aid and tuition policy studies
- ❖ Salary comparisons, equity studies
- ❖ Efficiency/process improvement studies
- ❖ When possible, provide peer comparisons



Peer Data – Why Use It?

- ❖ Used for benchmarking purposes
- ❖ May have different peers depending upon the questions being asked
- ❖ Can help explain/justify budget requests, teaching loads, salary adjustments, tuition and/or fee increases
- ❖ Assists in decision making – “What do our peers do?”



Four Types of Comparison Groups

(Teeter and Brinkman, 2003)

- ❖ Competitor – compete for students, faculty or finances
- ❖ Aspirational – dissimilar to your institution but worthy of emulation
- ❖ Predetermined – arranged together for some purpose (e.g., athletic conference, geographic, Carnegie classification)
- ❖ Peer – similar in role and mission



Peer Selection

- ❖ Project goal, use of data
- ❖ Availability of comparable data
 - National databases – IPEDS PAS
 - Consortia – AAUDE, SUG, HEDS
 - MHEC or MACC Groupings
- ❖ Clustering of data itself
- ❖ Institutional leader and decision-maker opinion
- ❖ *You may not necessarily be your peers' peer*



Tracking Student Progress

- ❖ Academic preparedness
- ❖ Cohort Tracking – Longitudinal Studies
 - Retention
 - Graduation / Time to Degree
 - Transfer
- ❖ Completers
- ❖ Grades/Course retention
- ❖ Progression to next level for sequenced courses
- ❖ Licensure Rates



Surveys and Focus Groups

- ❖ More than just administration
- ❖ Multiple uses (sometimes for the same data)
 - Institutional Effectiveness
 - Program Assessment
 - Marketing and Enrollment Management
 - Planning
- ❖ Use of a survey cycle to streamline process
- ❖ Institutional Human Subjects Review Board



Tips for Effective Surveys

❖ Plan

- Clear objectives
- Understand how the results will be used
- Identify critical questions
- Ask is the data collected anywhere else?
- How will you analyze and report the data
- Who will you survey? Sample or Census?
- How many?
- Know what other surveys are happening at your institution
- Understand the impact on instructional time



Enrollment Management and Projection

- ❖ Enrollment Management more than just projections
 - Marketing, admissions, retention, graduation
 - Not just institutional level – program, college, department
- ❖ More than just state mandates – MHEC and USM projections just a beginning
- ❖ Ongoing process



Enrollment Projection/Forecasting

- ❖ Part science, part art
- ❖ Requires blending of historical information with campus goals and expectations
 - Size
 - Selectivity
 - Capacity
- ❖ Institutional level enrollment projections
- ❖ Used for enrollment management, facilities planning AND for budget preparation (i.e. used to project revenue!)



Strategic Planning

- ❖ Collaborative process – IR supports (or leads)
- ❖ Policy analysis – data informs decisions
- ❖ Reflects mission and goals
- ❖ Ties to budget and institutional assessment strengthen the process
- ❖ Tools
 - SWOT
 - Environmental Scan
 - Indicators
 - Benchmarking



Assessment

- ❖ Evaluation for the purposes of improvement
- ❖ MISSION, MISSION, MISSION
- ❖ Comes in many varieties
 - Institutional Effectiveness – concerned with overall institutional performance on a variety of measures
 - Learning Outcomes – concerned with effectiveness of instruction
 - Program Assessment – concerned with the functioning of a discipline or curriculum - a blend of effectiveness and outcomes measures
 - Needs Assessment – concerned with determining the demand for a particular program or curriculum



Assessment Principles

Assessment helps us think about the following:

- ❖ What we want to do (goals and objectives)
- ❖ How we operationalize what it is we want to do (specific outcomes)
- ❖ How we are going to measure how well and what we are doing (methodology)
- ❖ What we are going to do with the information (feedback) that we generate



Understanding the Academy



THE CHRONICLE OF EDUCER EDUCATION

CABLE CABLE

*"There's absolutely nothing on this entire beach
that lends itself to a bulleted list."*



Tips for Success

- ❖ No matter how stressed, a lit review can save time in the long run
- ❖ Never forget core research practices
- ❖ Know your audience
- ❖ Don't just summarize – analyze and raise questions
- ❖ Remaining neutral increases credibility
- ❖ Maintain professional connections, remain active
- ❖ Take on innovative projects – don't be just a technocrat



More Tips for Success

- ❖ Document processes
- ❖ Understand your yearly cycle and production schedule
- ❖ Don't be afraid to ask for guidance – within your institution or within the state
- ❖ Vet early and often
- ❖ Become active at your institution – including activities outside the “normal” office duties
- ❖ Keep current with the literature
- ❖ Learn about all aspects of IR office functioning



Useful Mantras

- ❖ Great, Good, and Good Enough
- ❖ Forget perfection – improve continuously
- ❖ Analyze once, use often
- ❖ A great analysis that's never completed and distributed is no good to anyone
- ❖ No doorstops
- ❖ Avoid creating roadblocks
- ❖ Don't go it alone



Coping Mechanisms

- ❖ Use resources from associations
- ❖ Don't be afraid to contact those who know (including your supervisor)
- ❖ Ask for help setting priorities
- ❖ Read the Chronicle, Change and other higher education publications
- ❖ Find a group of trusted advisors
- ❖ Find a group of local IR peers
- ❖ Have fun



Resources for IR Professionals



AIR Published Materials

- ❖ Monographs
 - *Questionnaire survey research: What Works?*
 - *Strategies for the Practice of IR*
 - *People, Processes and Managing Data*
 - *Effective Reporting*
 - *The Primer For Institutional Research*
- ❖ *New Directions for Institutional Research*
- ❖ *Professional File*
- ❖ *AIR Alerts*



Journals

- ❖ Research in Higher Education
- ❖ Journal of Higher Education
- ❖ ASHE Higher Education Research Reports
- ❖ Society for College and University Planners (SCUP)
- ❖ Journal of Applied Research in the Community College (JARCC)
- ❖ Community College Journal



Reports – National Focus

- ❖ ASHE Higher Education Research Reports
- ❖ NCES Reports (Condition of Education, etc.)
- ❖ WICHE (Enrollment projection report)
- ❖ Lumina Foundation
- ❖ Education Commission of the States
- ❖ NCHEMS, IHEP, etc. reports



Other Regular Publications

- ❖ Chronicle of Higher Education
- ❖ Community College Times
- ❖ Change
- ❖ Postsecondary Opportunity
- ❖ University Business



Professional Associations

- ❖ National IR Organizations
 - Association for Institutional Research (AIR)
 - National Council for Research and Planning (NCRP)
 - Society for College and University Planners
- ❖ Regional & State AIR and SCUP
- ❖ American Educational Research Association
- ❖ American Association for Higher Education
- ❖ Association for the Study of Higher Education
- ❖ League for Innovation in Community Colleges



External Data Sources

- ❖ NCES – IPEDS data
 - Peer Analysis System (PAS)
 - Electronic Code Book (ECB)
- ❖ Data Sharing Consortia (HEDS, SUG, AAUDE, CSRDE)
- ❖ NCHEMS – National Center for Higher Education Management Systems
- ❖ Higher.org
- ❖ Commercial companies



IR Web Resources

- ❖ AIR
 - <http://www.airweb.org>
- ❖ NEAIR
 - <http://www.neair.org>
- ❖ American Association of Collegiate Registrars and Admissions Officers
 - <http://www.aacrao.org/>
- ❖ National Association of College and University Business Officers
 - <http://www.nacubo.org/>



Federal Web Resources

❖ NCES

- <http://www.nces.ed.gov>

❖ Census Bureau

- <http://www.census.gov>

❖ Bureau of Labor Statistics

- <http://www.bls.gov>

❖ Library of Congress

- <http://www.loc.gov>



National Organizations/ Publications

- ❖ National Student Clearing House
 - <http://www.nslc.org>
- ❖ National Governor's Association
 - <http://www.nga.org>
- ❖ The Chronicle of Higher Education
 - <http://chronicle.com>
- ❖ National Center for Higher Education Management Systems
 - <http://www.nchems.org>
- ❖ Council for the Advancement and Support for Education
 - <http://www.case.org>



Helpful Community College Web Sites

- ❖ American Association for Community Colleges
 - <http://www.aacc.nche.edu>
- ❖ The League for Innovation in the Community College
 - <http://www.league.org>
- ❖ National Council for Research and Planning
 - <http://www.nmsu.edu/~NCRP/>



Helpful Four-year Web Sites

- ❖ **AASCU – American Association of State Colleges and Universities** www.aascu.org
- ❖ **AAC&U – Association of American Colleges & Universities** www.aacu.org
- ❖ **AAU – Association of American Universities** www.aau.edu
- ❖ **CIC – Council of Independent Colleges** www.cic.org
- ❖ **NAICU - National Association of Independent Colleges and Universities** www.naicu.org
- ❖ **NASULGC – National Association of State Universities and Land Grant Colleges** www.nasulgc.org



Questions

Discussion

Evaluation