What is Institutional Research?

Santa Monica College
Fall 2011

Presented by:
Hannah Alford, Director
Ani Aharonian, Research Analyst
Office of Institutional Research
Workshop Overview

✓ Intro to Institutional Research (IR)
✓ IR at SMC
✓ Types of Data
✓ Types of IR Services
✓ Making the Best of IR Services (Help us help you)
✓ Culture of Inquiry
✓ IR Tools and Resources
Introduction to Institutional Research

• **Definition:** IR is a set of activities that support institutional planning, policy development, and decision making
  • Evaluation
  • Strategic planning and planning
  • Budget analysis
  • Enrollment management
  • Research studies

• **Evolution of IR:**
  • Early 1990’s to late 2000’s – focus on reporting **numbers and percentages**
    • Relied on standard data reports, similarly to TIMS
  • Since early 2000 – focus on **assessment and evaluation**
IR at SMC: Mission

MISSION:
The Office of Institutional Research at SMC strives to support the college's mission and commitment to student learning and success by providing quality, accessible, reliable and relevant information to facilitate decision-making and planning processes, enhance institutional effectiveness, and promote a culture of evidence-based inquiry.
IR at SMC: Core Functions

Program and Department Support
- Program review
- SLO assessment
- Planning & assessment
- Reporting requirements

College-Wide Support
- Institutional Effectiveness
- Initiatives – planning & assessment
- Committees – planning & assessment
- Grant – proposal & evaluation

Mandates
- Validate placement exams and course prerequisites
- Respond to federal & state reporting requirements

Office
- Maintain standard set of data reports
- Participate in campus dialogue
- Expand research capacity – educate
- Review requests to conduct research with SMC human subjects
IR at SMC

• Research Advisory Board
  • Advise IR office in prioritizing research and setting a research agenda

• Office Staff
  • Director: Hannah Alford
  • Research Analysts: Ani Aharonian, Daniel Berumen
# Types of Data

<table>
<thead>
<tr>
<th>Administrative (Regularly Collected)</th>
<th>Original (Need to Collect)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester or older</strong></td>
<td>Quantitative</td>
</tr>
<tr>
<td><strong>Student-level:</strong></td>
<td>Qualitative</td>
</tr>
<tr>
<td>• Demographic &amp; background</td>
<td>Examples:</td>
</tr>
<tr>
<td>• Course enrollment</td>
<td>Survey/questionnaire</td>
</tr>
<tr>
<td>• Course grade, certificates &amp; degrees</td>
<td>Student performance</td>
</tr>
<tr>
<td>• Placement results</td>
<td>Examples:</td>
</tr>
<tr>
<td>• Participation in counseling &amp; tutoring**</td>
<td>Focus group Interview</td>
</tr>
<tr>
<td>• ILO</td>
<td>Text analysis</td>
</tr>
<tr>
<td>• Financial aid received</td>
<td></td>
</tr>
<tr>
<td><strong>Course-level:</strong></td>
<td></td>
</tr>
<tr>
<td>• Course details by section (basic skills status, distance learning status, day/evening, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Aggregate:</strong></td>
<td></td>
</tr>
<tr>
<td>• Transfers to four-year</td>
<td></td>
</tr>
</tbody>
</table>
Types of Data: Administrative Data

- **Limited access**
  - Live data in ISIS
  - Student contact information
  - Data collected but not regularly reported (i.e., parent’s highest education, major)

- **No access**
  - Reports not produced by SMC IR
  - Census
  - What happens to students once they leave
  - Data about other schools
IR Services

- Data dump (for own analyses)
- Conduct research
  - Assist in formulation of research questions
  - Develop tools to collect data
  - Administer (collect) data
  - Analyze and organize data
  - Provide narrative (interpreting analysis findings)
  - Present findings
- Provide training, facilitate discussion of data
- Reporting requirements
Help Us Help You: Making Best Use of IR

• Dialog
  • Fosters culture of inquiry
  • Generates research questions and plans of action

• Planning ahead
  • Involve IR early
  • Allow enough time for requests

• Begin with a research question

• Think action
  • Plan how data will be used
Inquiry Process

• Inquiry process
• State of research in community colleges
• Research questions
• Research plan –
  • collecting data to inform plan/goals
  • collecting data to evaluate plan/goals
Successful Course Completion Rates

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>MATH101</td>
<td>45.0%</td>
<td>46.8%</td>
<td>46.2%</td>
</tr>
<tr>
<td>MATH102</td>
<td>33.5%</td>
<td>34.9%</td>
<td>32.1%</td>
</tr>
<tr>
<td>MATH103</td>
<td>39.9%</td>
<td>41.7%</td>
<td>38.3%</td>
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</tbody>
</table>
Most of my students are employed... they are juggling school and work which is a barrier.

Lot of students have childcare issues which affects their ability to come to class.

Students aren’t utilizing the math lab services.
Brainstorm

• Other reasons you believe students are achieving low success rates in math?
• Solutions/strategies/actions based on the anecdotes or hunches
### Findings from a Math Study (Not SMC)

<table>
<thead>
<tr>
<th>SURVEY</th>
<th>ADMINISTRATIVE DATA</th>
<th>FOCUS GROUPS/INTERVIEWS</th>
</tr>
</thead>
</table>
| ▪ Only 1/3 of students enrolled in math courses were working at least part time | Students who utilized math lab services did not have higher courses success rates than students who did not | • Students are dissatisfied with math lab services  
• Tutors are ineffective – ‘cannot teach to my level’ |
| ▪ Fewer than 10% of math students were caring for children/other family members | | |
| ▪ Half of students have utilized math lab services | | |
| ▪ Two-thirds of students reported studying fewer than 2 hours a week for their math course | | |

**Inquiry Process**
Typical Data Use Process

Anecdotes → Solutions/Actions

Data → Solutions/Actions
Informed solutions and purposeful change

Evaluate solutions/ changes

More data/literature review

Inquiry or hunches to explain data

DATA
State of Research in Community Colleges

• Research and Planning Group of California (RP Group) conducted a survey of data use in community colleges

Findings:
• Study found that colleges are *data rich but information poor*
• Colleges may be focusing on the *wrong data*
Study found that colleges are *data rich but information poor*

*Source: RP Group 2009, BRIC Project*
Colleges may be focusing on the *wrong data*

Consider the multitude of changes over this period:
- faculty/staff turnover
- program successes/failures
- changing student demographics
- budget contractions/expansion
- evolving state & accreditation mandates
- leadership turnover

and yet these performance metrics remained amazingly stable.

*Source: RP Group 2009, BRIC Project*
State of Research in Community Colleges

- Research and Planning Group of California (RP Group) conducted a survey of data use in community colleges

Findings:
- Study found that colleges are *data rich but information poor*
- Colleges may be focusing on the *wrong data*

Solution?
ASK THE RIGHT RESEARCH QUESTIONS
Inquiry Process

Informed solutions and purposeful change

Evaluate solutions/changes

Research Question

DATA

Inquiry or hunches to explain data

More data/literature review
Steps: Gathering Data

Purpose ➔ Research Question ➔ Methods
## Research Purpose

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic or Applied</td>
<td>Generation of new knowledge</td>
<td>What is the relationship between student-faculty interaction and academic self-concept?</td>
</tr>
<tr>
<td>Summative Evaluation</td>
<td>Determine effectiveness of products, processes, programs, and organizations</td>
<td>Does participation in the EOPS program increase term-to-term persistence?</td>
</tr>
<tr>
<td>Formative Evaluation</td>
<td>Ongoing improvement of products, processes, programs, and organizations</td>
<td>What are the strengths and weaknesses of the AAPIA program?</td>
</tr>
<tr>
<td>Action (Problem Solving)</td>
<td>Solve and important local problem of practice for the benefit of study’s stakeholders</td>
<td>Why do gaps in transfer rates between ethnic/race groups exist at SMC?</td>
</tr>
</tbody>
</table>
Research Questions

• Important/relevant
  • Salient and credible to stakeholders

• Clear and well-focused (specific)
  • Answer should be informative and lead to strategies for improvement, etc.
  • Answer should be focused on things we can control

• Answerable
  • Through collection of quantitative or qualitative data/evidence
Types of Research Questions

• Descriptive: *What is happening?*

• Causal: *Is there a systematic effect?*

• Process or mechanical: *Why or how is it happening?*
Methods

Research question dictates the method of data collection: qualitative, quantitative, or mixed

- Quantitative → numeric
- Qualitative → narrative
Research Design

- A series of step to follow that is designed to answer a research question
  
  - **Method**: Qualitative, quantitative, mixed
  
  - **Unit of analyses**: Individual, group, program components, whole program, organizations, etc.
  
  - **Measurement tool**: surveys, focus group, interview, administrative data, etc.
  
  - **Logistics**: when will the data be collected? For how long? Who will collect the data?
In Summary…

• Inquiry process ensures that data will be ‘action-able’

• Asking the right research questions will generate data that informs the development of appropriate solutions and goals

• Asking the right research questions will help us determine whether the solution or goal is ‘working’ – effectiveness

• The research question dictates the method of data collection
Resources

• Office of IR
  • Website Documents
  • Newsletter Blog
  • Staff development resources

• Other Resources
  • Chancellor’s Office
  • Cal-Pass SMART tool
  • CPEC
  • Survey Gizmo (contact IR)
Chancellor’s Office

California Community Colleges Chancellor’s Office

Technology, Research and Information Systems
- Division Home
- Vice Chancellor
- Management Information Systems
- Network and Support Operations
- Research, Analysis and Accountability
- Telecommunications and Technology
- Staff Directory

System Map
- System Grants
- Data Mart

Community College Listings
- Approved Programs
- Academic Holiday Calendar
- Professional Development

Student Demographics - Annual
- Query By College/Statewide
- Query By District

Full Time Equivalent Students (FTES)
- Query By College/Statewide
- Query By District

Full Time Equivalent Students (FTES) - By Distance Education Status
- Query By College/Statewide
- Query By District

Student Program Awards
- Query By College/Statewide

Program Retention/Success Rates
- Query By College/Statewide

Program Retention/Success Rates - By Distance Education Status
- Query By College/Statewide
- Query By District

Transfer Velocity Project Cohort
Cal-Pass SMART tool

What are our success rates by TOP code by fall term?

<table>
<thead>
<tr>
<th>Measures and Dimensions</th>
<th>Filter/Slicer</th>
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</thead>
<tbody>
<tr>
<td>Measures</td>
<td>College: NE</td>
</tr>
<tr>
<td>Course Enrollment Count</td>
<td>Chart</td>
</tr>
<tr>
<td>Distinct Student Count</td>
<td>Grid</td>
</tr>
<tr>
<td>CP</td>
<td>Time Period</td>
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<tr>
<td>FTES CP</td>
<td></td>
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<tr>
<td>Retention Rate</td>
<td></td>
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<tr>
<td>Success Rate</td>
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<tr>
<td>Course Enrollment Count</td>
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<tr>
<td>Course Enrollment Count All</td>
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</table>

### Success Rate by Time Period by TOP Code

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</tr>
</thead>
<tbody>
<tr>
<td>Architecture and Related Technologies</td>
<td>67.20%</td>
<td>68.58%</td>
<td>66.09%</td>
<td>63.64%</td>
<td>66.08%</td>
<td>65.22%</td>
<td>64.89%</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>62.09%</td>
<td>66.58%</td>
<td>66.09%</td>
<td>63.64%</td>
<td>66.08%</td>
<td>65.22%</td>
<td>64.89%</td>
</tr>
<tr>
<td>Business and Management</td>
<td>64.72%</td>
<td>70.83%</td>
<td>63.37%</td>
<td>63.65%</td>
<td>60.64%</td>
<td>60.73%</td>
<td>61.23%</td>
</tr>
<tr>
<td>Commercial Services</td>
<td>82.39%</td>
<td>76.16%</td>
<td>79.49%</td>
<td>72.64%</td>
<td>81.18%</td>
<td>68.77%</td>
<td>68.04%</td>
</tr>
<tr>
<td>Education</td>
<td>74.34%</td>
<td>77.86%</td>
<td>71.26%</td>
<td>74.56%</td>
<td>74.12%</td>
<td>73.23%</td>
<td>72.34%</td>
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<tr>
<td>Engineering and Industrial Technologies</td>
<td>70.03%</td>
<td>56.25%</td>
<td>76.13%</td>
<td>41.02%</td>
<td>44.44%</td>
<td>37.04%</td>
<td>44.83%</td>
</tr>
<tr>
<td>Family and Consumer Sciences</td>
<td>73.35%</td>
<td>76.11%</td>
<td>71.32%</td>
<td>72.81%</td>
<td>69.82%</td>
<td>68.52%</td>
<td>68.99%</td>
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<tr>
<td>Fine and Applied Arts</td>
<td>71.11%</td>
<td>72.75%</td>
<td>68.59%</td>
<td>67.59%</td>
<td>68.41%</td>
<td>67.66%</td>
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<tr>
<td>Foreign Language</td>
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<td>63.48%</td>
<td>64.40%</td>
<td>63.17%</td>
<td>67.03%</td>
<td>66.24%</td>
<td>65.12%</td>
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<tr>
<td>Health</td>
<td>74.10%</td>
<td>85.99%</td>
<td>81.28%</td>
<td>82.78%</td>
<td>80.02%</td>
<td>79.66%</td>
<td>82.85%</td>
</tr>
<tr>
<td>Humanities (letters)</td>
<td>68.85%</td>
<td>69.33%</td>
<td>68.45%</td>
<td>65.25%</td>
<td>64.52%</td>
<td>65.65%</td>
<td>65.98%</td>
</tr>
<tr>
<td>Information Technology</td>
<td>60.65%</td>
<td>66.70%</td>
<td>62.08%</td>
<td>60.24%</td>
<td>61.38%</td>
<td>63.11%</td>
<td>65.08%</td>
</tr>
<tr>
<td>Interdisciplinary Studies</td>
<td>70.20%</td>
<td>71.10%</td>
<td>69.12%</td>
<td>70.26%</td>
<td>69.12%</td>
<td>66.30%</td>
<td>59.77%</td>
</tr>
<tr>
<td>Law</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Library Science</td>
<td>71.26%</td>
<td>60.19%</td>
<td>46.50%</td>
<td>50.63%</td>
<td>62.38%</td>
<td>55.04%</td>
<td>51.38%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>49.25%</td>
<td>47.53%</td>
<td>48.92%</td>
<td>49.51%</td>
<td>48.92%</td>
<td>49.62%</td>
<td>47.69%</td>
</tr>
<tr>
<td>Media and Communications</td>
<td>74.10%</td>
<td>70.05%</td>
<td>69.35%</td>
<td>70.02%</td>
<td>69.02%</td>
<td>71.22%</td>
<td>72.72%</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>68.02%</td>
<td>68.41%</td>
<td>65.01%</td>
<td>65.91%</td>
<td>65.85%</td>
<td>66.43%</td>
<td>64.73%</td>
</tr>
<tr>
<td>Psychology</td>
<td>67.01%</td>
<td>67.01%</td>
<td>60.82%</td>
<td>59.49%</td>
<td>61.58%</td>
<td>61.61%</td>
<td>63.18%</td>
</tr>
<tr>
<td>Public and Protective Services</td>
<td>68.59%</td>
<td>86.07%</td>
<td>56.00%</td>
<td>64.05%</td>
<td>64.24%</td>
<td>63.20%</td>
<td>64.23%</td>
</tr>
</tbody>
</table>
CPEC

Postsecondary Education Commission

Custom Data Reports

Fully customize data reports — select which columns or fields to include and specify the filters so that you get only the data you need. The data reports are generate data available. View a table showing this information.

NOTE:
Most data available from this system is for the Fall term of the academic year selected unless otherwise noted.

First-Time Users: Instructions are available on how to use this system.

How to do it: Watch a short video (5:51) to see how easy it is.

Select a Data Report

Higher Education Enrollment
  General Enrollment Numbers
  First-Time Students
  College-Going Counts
  Majors / Instructional Program Enrollment
  Full-Time Equivalent Enrollment

Transfers to Higher Education
  Fall-Term Transfers to Private and Public Institutions
  Full-Year Transfers to Public Institutions

Degrees Awarded / Completions
  General Degree / Completion Numbers
  Degrees / Completions in Majors / Instructional Program

Grade School and High School
  Enrollment by Grade Level
  Public High School Data
  Private High School Graduates
Questions?

Thank you!!!