BASIC SKILLS BOOT CAMP
Supporting Innovation Through Research Design

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Examples of How Data Informs Decision-Making

- Mixed Methods
- Smart Start
- Distance Education
Evaluator Comments about Tutors with a Lower than Average (i.e. 2.51) Rating

• According to the comments of the evaluators, tutors with a below average overall rating were lacking in some aspect of tutoring like initiative, low attendance, and poor behavior management skills.
  • “It was great having [NAME] in my class! My only suggestion would be that she could take a little more initiative.”
  • “[NAME] had plenty of subject matter knowledge just needs support in behavior management. Perhaps that could be included in prep program at Chaffey.”

Evaluator Comments about Tutors with an Average or Above Average Rating (2.57-2.99)

• The comments of the evaluators about paid tutors in the average or above category were very positive. However, the ratings appear to indicate that the tutor received a lower rating in one or two areas.
  • [NAME] worked very well with my students. She had a lot of patience with them.
  • [NAME] is an excellent role model for my students. His attendance is his weakness; we depend on him and it impacts our program when he doesn’t come and work.

Evaluator Comments about Tutors who were Rated as Exceeding Expectation in All Areas

• Students in the “Perfect” category received very positive comments. See samples below:
  • [NAME]’s enthusiastic attitude, ability to relate to students, and knowledge of content assisted him in helping our students become successful.
  • [NAME] was reliable, hard working, and a wonderful communicator to the student. [NAME] always offered to do more no matter what the task. Thorough tutor!
Evidence-Based Decision Making
Smart Start Program

- Research was conducted to identify students who are most likely to experience academic probation.
- Approximately 30 predictor variables were identified to help predict academic probation for students who took the assessment.
- **Important Notice: Smart Start Program**
  Your test results indicate that you could benefit from participating in the Smart Start program for new first time college students. Please see the testing attendant immediately for additional information on how to complete your COUNSELING and ORIENTATION through the Smart Start program.
Evidence-Based Decision Making
Distance Education Recommendation

- Research was conducted to identify students who are more likely to successfully complete an online course.
- Approximately 30 predictor variables were identified to help predict success in online courses.
Evidence-Based Decision Making
Distance Education Recommendation

- **Important Notice: Enrolling in Online Courses at Chaffey College**
  - Based on your educational background information you are much more likely to earn a grade of A, B, C, or CR in an internet course than other students. Accordingly, please consider enrolling in an internet course at Chaffey College. Support for enrolling in internet courses at Chaffey can be obtained at www.chaffey.edu/onlineed, by calling the Distance Education Office at 909-652-6975, or by emailing the Distance Education Office at OnlineEd@chaffey.edu.

- **Important Notice: Enrolling in Online Courses at Chaffey College**
  - It is strongly recommended that if your are interested in taking an internet course at Chaffey College you first have a Chaffey College GPA of 3.00 or higher. In addition, students who are fluent writers, who enjoy reading, who are comfortable with computer technology, who are responsive to deadlines, and who recognize that online courses are often more work than traditional courses are more likely to earn a “C” grade or better in a DE courses. Please discuss your interest in enrolling a DE course with a counselor. Additional support for enrolling in internet courses at Chaffey can be obtained at www.chaffey.edu/onlineed, by calling the Distance Education Office at 909-652-6975, or by emailing the Distance Education Office at OnlineEd@chaffey.edu.
Setting the Stage for Evidence-Based Decision-Making

- Leadership
- Climate
- Continuity
- Transparency
- Evidence
Questions to NEVER Lose Sight Of…

How well are we doing?

How do we know?
Getting to Know Your Researcher
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- Useful Common Data Sources
- Commonly Accepted Outcome Measures
- Basic Research Designs
- Tips for Developing Rubrics
- Developing a Framework for Evidence
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- **Useful Common Data Sources:**
  - Chancellor’s Office Data Mart:
    - Student Demographic Data (Term & Annual)
    - Matriculation and Assessment Services
    - Student Services Programs
    - Financial Aid Awards
    - Program Award Data (Degrees & Certificates)
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- Useful Common Data Sources:
  - MIS Referential File Data:
    - Over 200 Data Elements
    - Term Specific and Annual Data
    - Student Data
    - Enrollment Data
    - Course and Section Data
NOTE: These data elements belong to the table which links the Student and the Section databases and so belong to both databases.

*Key Fields
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- **Useful Common Data Sources:**
  - MIS Data Element Dictionary:
  - Useful Student Demographic Data Elements:
    - Student ID (SB00)
    - Ethnicity (SB05)
    - Gender (SB04)
    - Student Multi-Ethnicity (SB29)
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- **MIS Data Elements:**
  - **Useful Student Demographic Data Elements:**
    - Age at Term (STD1)
    - Primary Disability (SD01)
    - Enrollment Status (SB15)
    - Uninformed Educational Goal (SB14)
    - Informed Educational Goal (SM01)
    - Type of Financial Aid Received (SF21)
    - Amount of Financial Aid Received (SF22)
    - EOPS End-of-Term Status (SE03)
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- **MIS Data Elements:**
  - **Useful Course Data Elements:**
    - Course ID (CB01)
    - Course Credit Status (CB04)
    - Course Transfer Status (CB05)
    - Course Basic Skills Status (CB08)
    - SAM Code (Occupational Status) (CB09)
    - Course Prior-to-College Level (CB21)
  - **Useful Section Data Elements:**
    - Accounting Method (XB01)
    - Day/Evening Status (XBD3)
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- **MIS Data Elements:**
  - **Useful Enrollment Data Elements:**
    - Section ID (XB00)
    - Grade Earned (SX04)
    - Units Attempted (SCD3)
    - Units Earned (SX03)
  - **Other Useful Data Elements:**
    - Faculty Type (XE01)
    - Session Data Elements (XF Data Elements)
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- **MIS Data Elements - Annual:**
  - **Financial Aid Applicant (SF) and Award (SA) Data:**
    - Student Aid Applicant Status (SF01)
    - Student Aid Total Budget Amount (SF04)
    - Student Award Type (SF21)
    - Student Award Amount (SF22)
  - **Program Award Data:**
    - Student Program Identifier (SP01)
    - Student Program Award (SP02)
    - Student Program Award Earned (SP03)
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- **Useful Common Data Sources:**
  - Chancellor’s Office Data on Demand:
    - [https://misweb.cccco.edu/dataondemand/](https://misweb.cccco.edu/dataondemand/)
    - Referential Data Files
    - Categorical Pre-Allocation Data Files (e.g., DSPS, EOPS)
    - ARCC Data Files
    - Perkins Data Files
    - Custom Student Data Files (i.e., create your own)
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Commonly Accepted Outcome Measures
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- **Commonly Accepted Outcome Measures**

  - **Success Rate:**
    - **Definition:** Student succeeds in the course (A, B, C, or CR grade notations)
    - Percent of students successful in courses out of total enrolled in courses
    - The success rate is calculated by dividing the numerator by the denominator and multiplying by 100
    - **Numerator:** Number of students (duplicated) with A, B, C, or CR grade notation
    - **Denominator:** Number of students (duplicated) with A, B, C, D, F, CR, NC, I, or W grade notation
Commonly Accepted Outcome Measures

Retention Rate:

- **Definition:** Student is retained in the course to end of term (A, B, C, CR, D, F, NC, or I grade notations)
- Percent of students retained in courses out of total enrolled in courses
- The retention rate is calculated by dividing the numerator by the denominator and multiplying by 100
- **Numerator:** Number of students (duplicated) with A, B, C, CR, D, F, NC, or I grade notation
- **Denominator:** Number of students (duplicated) with A, B, C, D, F, CR, NC, I, or W grade notation
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- **Commonly Accepted Outcome Measures**

  - **Term-to-Term Persistence Rate:**

    - **Definition:** Student persists from one term to the next
    - **First Term:** Student is enrolled in at least one course (A, B, C, D, F, CR, NC, I, or W grade notation)
    - **Next Term:** Student is enrolled in at least one course (A, B, C, D, F, CR, NC, I, or W grade notation)
    - Percent of students enrolled in next term out of students enrolled in first term. Divide numerator by denominator, multiply by 100
    - **Numerator:** Number of students enrolled in next term with at least one A, B, C, CR, D, F, NC, or I grade notation
    - **Denominator:** Number of students enrolled in first term with at least one A, B, C, D, F, CR, NC, I, or W grade notation
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- **Commonly Accepted Outcome Measures**

  - **Transfer Measures:**
    - **Transfer Attempted:** Student enrolls in any transfer-level English and Math course
    - **Transfer Directed:** Successfully completed (A, B, C, or CR grade notation) a transfer-level English and Math course
    - **Transfer Prepared:** Transfer Directed and complete 60+ CSU/UC transferable units with a 2.00 transfer GPA
    - **Transferred:** Various methods (e.g., track students through the National Student Clearinghouse (NSC) to a four-year postsecondary educational institution)
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**Commonly Accepted Outcome Measures**

- **ARCC Measures:**
  - **Student Progress and Achievement Rate:** Percentage of first-time students who showed intent to complete and achieved any of the following outcomes within six years:
    - Transferred to a four-year college
    - Earned an AA/AS Degree
    - Earned a Certificate (18+ Units)
    - Achieved Transfer-Directed Status
    - Achieved Transfer-Prepared Status
  - **Earned at Least 30 Units:** Percentage of first-time students who showed intent to complete and who earned 30 units
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- Commonly Accepted Outcome Measures

- ARCC Measures:
  - **Persistence Rate:** Percentage of first-time students taking 6+ units who enroll in following fall semester
  - **Course Completion Rate in Credit Vocational Courses**
  - **Course Completion Rate in Credit Basic Skills Courses**
  - **Basic Skills Improvement Rate:** Percent of students who successfully completed at least one basic skills course who successfully completed a higher level basic skills course in the same discipline (e.g., English, math, reading, or ESL) or a college-level course within two years of taking the first basic skills course
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Basic Research Designs
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**Basic Research Designs**

Pre/Post Assessment

- Conduct Pre-Assessment
- Intervention is Administered (i.e., you do something)
- Conduct Post-Assessment

After doing something, was there change from pre-to-post?
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- **Basic Research Designs**

Pre/Pre/Post Assessment

- Conduct Pre-Assessment
- Intervention is Administered
- Re-Administer Pre-Assessment Before Post-Assessment
- Conduct Post-Assessment

Did perception from Pre1-to-Pre2 change? Pre1, Pre2 to Post?
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Basic Research Designs

Post Assessment Only

- No Pre-Assessment Occurs
- Set Anticipated Criteria (Level of Performance/Outcome)
- Intervention is Administered
- Conduct Post-Assessment

After intervention, did population achieve pre-set criteria?
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- Basic Research Designs

Cohort Tracking

- Identify Cohort
- Intervention is Administered
- Track Over Time

Opportunity to measure behavior over time
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- **Basic Research Designs**
  - Between Group Comparison

- Conduct Pre-Assessment (Both Groups)
- Intervention is Administered to Experimental Group
- Conduct Post-Assessment (Both Groups)

After intervention, does experimental group differ from control group?
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- **Basic Research Designs**

**Correlational Relationship**

- Correlational studies help identify which variables predict or explain outcomes
- Correlation does not equal causation!
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Rubric Development
Developing and Using a Rubric:

- Explicit scheme for classifying products or behaviors into categories that vary along a continuum
- *Almost* anything can be classified:
  - Essays
  - Reports
  - Oral Presentations
  - Performance (e.g., art work, recitals, simulations)
  - Portfolios
  - Group Activities
Developing and Using a Rubric:

- **Strengths of a Rubric:**
  - Content experts can develop precise definitions
  - Complex products and behaviors can be examined more efficiently
  - Usually results in less subjective measurement

- **Weaknesses of a Rubric:**
  - Sometimes difficult to achieve consensus on classification categories
  - Training issues - consistency in application and use
  - Time to develop, review, and modify rubrics
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- Developing and Using a Rubric:
  - Judgments can be:
    - Made by faculty and staff
    - Self-assessed by students
    - Made by qualified external reviewers
  - Two main types of rubrics:
    - Holistic Scoring – one global score for a product or behavior
    - Analytical Rubrics – separate holistic scoring of specified characteristics of a product or behavior
### Supporting Innovation Through Research Design

**Example:** Oral Communication Evaluation Sheet

<table>
<thead>
<tr>
<th><strong>Material Organization</strong></th>
<th><strong>Points</strong></th>
<th><strong>CRITERIA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>1 – 10</td>
<td><strong>Holistic Criteria</strong></td>
</tr>
<tr>
<td>Logical Organization</td>
<td>1 – 10</td>
<td>Average Rating of 85 or Higher</td>
</tr>
<tr>
<td>Content</td>
<td>1 – 10</td>
<td><strong>Analytical Criteria</strong></td>
</tr>
<tr>
<td>Supporting Material</td>
<td>1 – 10</td>
<td>On no one component will the average score be less than 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Delivery &amp; Presentation</strong></th>
<th><strong>Points</strong></th>
<th><strong>CRITERIA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice &amp; Enunciation</td>
<td>1 – 10</td>
<td><strong>Holistic Criteria</strong></td>
</tr>
<tr>
<td>Language</td>
<td>1 – 10</td>
<td>Average Rating of 85 or Higher</td>
</tr>
<tr>
<td>Gestures</td>
<td>1 – 10</td>
<td><strong>Analytical Criteria</strong></td>
</tr>
<tr>
<td>Eye Contact</td>
<td>1 – 10</td>
<td>On no one component will the average score be less than 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Overall Effectiveness</strong></th>
<th><strong>Points</strong></th>
<th><strong>CRITERIA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Audience Appeal</td>
<td>1 – 10</td>
<td><strong>Holistic Criteria</strong></td>
</tr>
<tr>
<td>Speaker Attitude</td>
<td>1 – 10</td>
<td>Average Rating of 85 or Higher</td>
</tr>
</tbody>
</table>

**TOTAL:** 10 – 100
Developing and Using a Rubric:

- Identify what you want to assess
- Identify the characteristics of what you want to assess
- Start with identifying characteristics that define “proficient” or “acceptable” outcome on product or behavior being assessed
- Identify characteristics of best possible outcome (i.e., ‘advanced,’ ‘excellent,’ ‘superior,’ etc.) on product or behavior being assessed
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- **Developing and Using a Rubric:**
  - Identify characteristics of worst possible outcome (i.e., ‘beginner,’ ‘poor,’ ‘unacceptable,’ etc.) on product or behavior being assessed.
  - Develop descriptors that characterize intermediate levels (e.g., ‘below proficient,’ ‘fair,’ etc.) of product or behavior being assessed.
  - Review and expand/collapse categories as applicable.
  - Seek external review/feedback.
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- Some Online Rubric Generators:
  - Rubistar: http://rubistar.4teachers.org/index.php
  - teAchnology: www.teach-nology.com/web_tools/rubrics/general
  - ThinkingGear: www.thinkinggear.com/tools/rubrics.cfm
  - RCampus: www.rcampus.com/rubricshellc.cfm?mode=gallery&sms=build&nocache=1243376942239
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Creating a Framework for Evidence
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- **Elements of a Framework for Evidence:**
  - What do you plan to assess?
  - What population? (i.e., who gets assessed?)
  - What instruments/data will you use?
  - When will data collection occur?
  - How often will assessment occur?
  - How will evidence be analyzed?
  - How will evidence be documented?
  - Who will reflect on the findings? When?
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So…

What can you come up with?
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