Demystifying Evidence-Based Student Success Research (Workshop 1 of 3)

Tuesday, July 25, 2023 | 1:00-2:30PM ET
Agenda

- Evidence-based definition and standards
- Keynote presentation
- Audience Q&A session
- Breakout case discussions
- Report outs and live synthesis
- Closing and next steps
DEFINING “EVIDENCE” & “EVIDENCE-BASED”
Landscape Scan

Goals

▪ Create a definition of “evidence-based” student success interventions/programs
▪ Develop standards/guidelines for varying rigors of “evidence”

Methodology

1. Scanned APLU project and grant reports
2. Scanned federal agencies, educational and evaluation organizations, and foundations (within and outside the education sector)
3. Synthesized findings
### Definitions ranged from general to specific/rigorous

**General**

- **Student outcome data and other evaluation data** reflecting the overall quality of the scaling effort

  -- Complete College America, Metrics and Evidence Scaling Standards

**In-Between**

- Any concept or strategy that is derived from or informed by **objective evidence**—most commonly, **educational research or metrics** of school, teacher, and student performance.

  -- Great Schools Partnership, Glossary of Education Reform

**Specific/Rigorous**

- An activity, strategy, or intervention that demonstrates a **statistically significant effect** on improving student outcomes or other relevant outcomes based on Strong, Moderate, or Promising evidence OR demonstrates a rationale based on **high quality research findings** or **positive evaluation** that such activity, strategy, or intervention is likely to improve student outcomes...and includes ongoing efforts to examine the effects of such activity, strategy, or intervention.

  -- U.S. Department of Education, Every Student Succeeds Act
APLU’s Evidence-Based Student Success Design Guide

- Definitions of common research terms
- Evidence standards from 3 organizations
- Definitions of "evidence-based" from our landscape scan
- Examples of interventions based on tiers of evidence

Evidence-Based SS Intervention Guide
## Examples of Rigorous Definitions

<table>
<thead>
<tr>
<th>Organization, Initiative/Title</th>
<th>Definition</th>
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| **ED, What Works Clearinghouse (WWC)** | Ratings of Strong, Moderate, Promising evidence or Evidence that demonstrates a rationale based on rigor of research, methods, and significance of findings.  
- Strong evidence includes an **experimental study** demonstrating a statistically significant and positive effect  
- Moderate evidence includes a **quasi-experimental study** demonstrating a statistically significant and positive effect  
- Promising evidence includes a **correlational study** with statistical controls demonstrating a statistically significant and positive effect  
- The lowest tier is not based on research findings but "should indicate that the project component is likely to improve a relevant outcome." |
| Mathematica, Education to Workforce Indicator Framework | Informed and supported by rigorous evidence demonstrating consistent, positive impacts on individual outcomes.  
- **Causal research** is the most rigorous type of evidence available to gauge the effectiveness of a practice in the context studied. Causal research includes **experimental studies** and **quasi-experimental** studies, such as those identifying a matched comparison group similar to the intervention group based on available baseline data.  
- Other types of research, such as **descriptive or correlational studies**, can point to promising practices and inform our understanding of a problem and potential solutions, but these studies do not conclusively show whether a practice was effective. |
| **MDRC, College Completion Strategy Guide** | Policies and practices evaluated in well-designed **experimental studies** and successfully replicated in other contexts. Research methods include experimental, quasi-experimental, meta-analyses, descriptive data, qualitative research, and implementation and cost studies. |
Common Research Methods Terms

- Intervention
- Outcome
- Study
- Comparison group design
  - Randomized Control Trial
  - Quasi-Experimental Design
  - Regression Discontinuity Design
- Descriptive/Correlational study
- Causal
- Effect size
- Statistical significance
- Quantitative research
- Qualitative research
- Mixed methods research
# Tiers of Evidence (WWC Examples)

<table>
<thead>
<tr>
<th>Definition: Evidence based on...</th>
<th>Strong</th>
<th>Moderate</th>
<th>Promising</th>
<th>Evidence for rationale</th>
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<tbody>
<tr>
<td>At least 1 well-designed, well-implemented <strong>experimental study</strong> demonstrating a statistically significant and positive effect</td>
<td>At least 1 well-designed, well-implemented <strong>quasi-experimental design study</strong> demonstrating a statistically significant and positive effect</td>
<td>At least 1 well-designed, well-implemented <strong>correlational study with statistical controls</strong> for selection bias demonstrating a statistically significant and positive effect</td>
<td>Does <strong>not need to be based on research</strong> with a statistically significant finding, but should indicate that the project component <strong>is likely to improve a relevant outcome</strong></td>
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<td><strong>Intervention</strong></td>
<td>Dana Center Mathematics Pathways (DCMP) “…offers multiple math pathways aligned to programs of study...”</td>
<td>Single Stop USA’s Community College Initiative supports students “with screening and applications for public benefits and other wraparound services…and immigration consultations.”</td>
<td>Bottom Line Transition to College “…provides intensive advising for low-income high school students, most of whom are the first in their family to go to college.”</td>
<td>Developmental Summer Bridge Programs provide “…accelerated instruction in areas where additional knowledge and skills are needed...”</td>
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<td><strong>Evidence</strong></td>
<td>One Randomized Control Trial (RCT), Two Quasi-Experimental Design (QED) studies showing positive and statistically significant results</td>
<td>Two QED studies showing positive and statistically significant results</td>
<td>One RCT showing positive and statistically significant results for 2 outcomes (college enrollment and progression) and results for 3 outcomes that did not meet research standards (application rate, FAFSA completion rate, # applications completed)</td>
<td>One RCT Nine other studies Results not statistically significant</td>
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Considerations When Selecting Evidence-Based Intervention

- Has the intervention been studied previously and if not, how can your implementation generate new evidence?

- Has the intervention been studied in multiple, diverse settings and if not, can your implementation study its effect in a newer setting?

- Is the intervention scalable, given the impact vs cost?

- Are there external or contextual factors, like state/system policies or ethical concerns, that might affect the design and implementation?
Considerations When Selecting Research Method

- Are there any external or contextual factors (e.g., populations served, state/system policies, ethical concerns) beyond the research that may affect the level of evidence?
- Are experimental studies considered ethical and feasible for the desired intervention?
- Do you have access to resources to conduct rigorous studies (e.g., staff, time, money, infrastructure)?
- When experimental designs are not feasible, can qualitative research offering meaningful insights into program design, delivery, scalability be used instead?
BREAKOUTS — CASE STUDIES
Co-Requisite English Case Study
Your university just piloted a project to replace a developmental English course with a co-requisite model. The co-requisite was piloted with two sections of gateway English and outcomes for eligible students in those sections were compared with their peers in the developmental course. So far, the data are positive – more students are passing the course with the co-req than the developmental course, allowing them to earn credit and progress more quickly. The student success team plans to apply for funding from the Department of Education to scale this program to all sections and evaluate impact.

Advising Case Study
Your university is thinking of redesigning its advising program to provide a comprehensive, integrated advising service to undergraduate students. Advisors would be trained and coached on how to develop personalized and proactive relationships with individual students throughout the duration of their college career. Advisors would be equipped to connect students with a broad range of academic and non-academic supports (e.g., mental health services, financial support, career preparation). The student success team reviewed a What Works Clearinghouse practice guide and decided to implement an Appreciative Advising framework that is supported by prior studies. The university plans to roll out this framework to its advisors by providing training and follow-up coaching.
UPCOMING EVENTS AND RESOURCES
Upcoming APLU-USU Events & Resources

- **July**
  - Workshop #1 recording & slides distributed
  - Department of Education FIPSE Postsecondary Student Success Funding Opportunity Announcement (expected July 26)

- **August**
  - Resource: APLU Evidence-Based Student Success Intervention Design Guide
  - Workshop #2, Effective Program Design and Evaluation, **August 10, 3:00-4:30 PM ET**

- **September**
  - Workshop #3, Applying for Funding through the FIPSE Postsecondary Student Success Program, **September 20, 2:00-3:30 PM ET**