Early Findings from an Experimental Evaluation of Accelerated Pathways in Texas

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Today’s discussion

• Background on the study of Texas writing/reading corequisites

• Early findings on short-term student impacts

• Early findings on implementation
The nation has been moving toward accelerated models of developmental education

- Advocacy organizations and funders encouraging developmental education (DE) reform in states
  - Restructuring how DE is delivered (acceleration, structured pathways)
  - Improving placement accuracy with multiple measures

- Examples of states implementing reforms to accelerate student progression
  - 2011: Texas requires colleges to offer accelerated models
  - 2013: Florida eliminates funding for DE and requirements that students participate in DE
  - 2015: Tennessee requires all students to enroll in corequisite DE
Corequisites are one particular model of acceleration

Traditional pathway

Corequisite approaches

Semester 1

DE Course(s)

College-Level Course

Semester 2

College-Level Course

Other College-Level Courses

Corequisite DE Support
(DE course or non-course based option)
Texas has been a leader in reforming developmental education through corequisites

- In 2011, SB 162 requires institutions to offer accelerated models
- In 2017, HB 2223 calls for scale up of corequisites to a larger number of students
- Colleges across the state are experimenting with a number of different corequisite models
  - Attached to different gateway courses
  - Varying in the hours of developmental ed support
  - Employing varying instructional approaches
Rigorous research on corequisites is limited

Prior research indicates positive outcomes for students placed into corequisites

BUT

Studies are generally descriptive and do not support causal conclusions
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Study only looked at one corequisite model, and focused largely on short-term impacts
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Prominent study on the Accelerated Learning Program (ALP) used more rigorous approach (Cho et al., 2012)

Study was not randomized, looked at one corequisite model, and focused largely on short-term impacts

Growing descriptive evidence on student outcomes associated with statewide reforms

Little evidence on implementation and costs of different corequisite approaches
Our study addresses many limitations of existing studies

- First large multi-site randomized control trial (RCT) evaluation of corequisites
- Examines long-term outcomes including performance in follow-on courses, persistence, transfer, and degree completion
- Assesses impact, implementation, and costs of three corequisite models
We address the following research questions

1) What types of corequisites are being implemented in Texas?

2) Do corequisites at 5 community colleges in Texas lead to improved college success outcomes for students?

3) How do the impacts of corequisites at 5 colleges vary by model, student characteristics, and implementation?

4) To what degree do the experiences of students in corequisites differ from those in traditional DE?

5) To what degree are corequisites being implemented in ways that align with developmental education practices found to be promising?

6) What are the barriers and facilitators to corequisite implementation?
The study has two different components

**RCT impact and implementation analysis**

To evaluate the causal impact of a set of corequisites and develop a detailed understanding of implementation.

**Statewide implementation analysis**

To understand how experiences at the 5 RCT colleges are similar/different from community colleges across Texas, and broaden evidence on implementation.
The study has two different components

**RCT impact and implementation analysis**

- El Paso Community College
- Houston Community College
- Lone Star College - Tomball
- Lone Star College - University Park
- Mountain View College (Dallas CCCD)

**Statewide implementation analysis**

- All community colleges in Texas
We conducted a randomized experiment to assess impacts on student outcomes

**RCT impact analysis**
- Recruited students within a specific score range near college-ready
- Collected detailed baseline survey data on student characteristics
- Within each college, students randomly advised into either:
  - Traditional DE (integrated reading and writing), 3-4 credit hours
  - Institution’s corequisite model (all paired with English 1301), 4 credit hours

**Study activities**
- We will examine course performance, persistence, and degree completion over 3 years
- We will identify impact variation by model, student characteristics, implementation

Today’s presentation focuses on 975 students randomized in fall 2016. Between fall 2016 and fall 2017, a total of 1,756 students were randomized.
We assessed impact and implementation for three types of corequisite models

<table>
<thead>
<tr>
<th></th>
<th><strong>Accelerated Learning Program</strong></th>
<th><strong>Extended Instructional Time</strong></th>
<th><strong>Required Support Service Use</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structure of support</strong></td>
<td>Classroom instruction</td>
<td>Classroom instruction</td>
<td>Tutoring, office hours</td>
</tr>
<tr>
<td><strong>Coursework in support</strong></td>
<td>Mix of English 1301 coursework and additional work</td>
<td>Mostly English 1301 coursework, some additional work</td>
<td>All English 1301 coursework</td>
</tr>
<tr>
<td><strong>Student mix in college course</strong></td>
<td>Mix of college-ready and DE</td>
<td>All DE</td>
<td>Mix of college-ready and DE</td>
</tr>
<tr>
<td><strong>Student-to-instructor ratios</strong></td>
<td>Smaller than traditional course</td>
<td>Same as traditional course</td>
<td>Smaller than traditional course</td>
</tr>
</tbody>
</table>
Colleges used a common writing range, but reading scores varied

<table>
<thead>
<tr>
<th>Institution</th>
<th>Writing score for 2016-17 study participation</th>
<th>Reading score for 2016-17 study participation</th>
</tr>
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<tbody>
<tr>
<td>El Paso Community College</td>
<td>350-362, essay score 4</td>
<td>310-390</td>
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<tr>
<td>Houston Community College</td>
<td>350-362, essay score 4</td>
<td>351-390</td>
</tr>
<tr>
<td>Lone Star Tomball</td>
<td>350-362, essay score 4</td>
<td>343-390</td>
</tr>
<tr>
<td>Lone Star University Park</td>
<td>350-362, essay score 4</td>
<td>343-390</td>
</tr>
<tr>
<td>Mountain View College</td>
<td>350-362, essay score 4</td>
<td>310-390; 351-390</td>
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We collected a range of implementation data from RCT colleges

RCT implementation analysis

Study activities

- Faculty survey (N=212)
- Interviews with administrators (N=19)
- Focus groups with faculty and students (Ns=29, 30)
- Classroom observations (N=48)
- Student surveys (N=462)
- Review of documentation (e.g., syllabi, essay prompts)
- Collection of cost data
Our statewide implementation data supplements RCT findings

Statewide implementation analysis

(N=31)

- Phone interviews with administrators and faculty at other Texas community colleges
- Analysis of statewide administrative data and annual state Developmental Education Program Survey

Study activities
Two research questions were addressed in an interim report available on the RAND website

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2) Do corequisites at 5 community colleges in Texas lead to improved college success outcomes for students?

3) How do the impacts of corequisites at 5 colleges vary by model, student characteristics, and implementation?

4) To what degree do the experiences of students in corequisites differ from those in traditional DE?

5) To what degree are corequisites being implemented in ways that align with developmental education practices found to be promising?

6) What are the barriers and facilitators to corequisite implementation?
Today’s presentation provides early findings on two additional questions

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Today’s discussion

• Background on the study of Texas writing/reading corequisites
• Early findings on short-term student impacts
• Early findings on implementation
One-year RCT impact results are promising and aligned with previous studies.

Percentage Passing English 1301 within One Academic Year

- Overall: 39.8% (Control), 64.9% (Treatment)
- Hispanic: 39.6% (Control), 69.9% (Treatment)
- First Generation College Student: 35.1% (Control), 64.2% (Treatment)

Note: All differences between control and treatment 1301 passing rates were statistically significant at the p<0.01 level.
One-year RCT impact results are promising and aligned with previous studies.

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All three corequisite models in the RCT showed positive one-year impacts.

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Today’s discussion

• Background on the study of Texas writing/reading corequisites
• Early findings on short-term student impacts
• Early findings on implementation
We needed a common framework for assessing implementation across models

• Allows us to better make cross-model comparisons than would be possible for model-specific fidelity measures

• Provides a consistent evaluation framework for models where optimal implementation and fidelity was sometimes not well defined

• A broader conception of “high-quality implementation” could benefit the field by:
  – Providing flexible measures for evaluation and continuous improvement for institutions to use across models
  – Ensuring a focus on the key underlying concepts driving success, as opposed to simply design features
We identified key promising practices for supporting developmental education students

Informed by the theory and evidence from the literature on developmental education, with a specific focus on the evidence around accelerated models

Informed by interviews with administrators and faculty across 36 Texas community colleges
Our implementation framework includes nine sets of promising DE practices

- Accelerated opportunities to earn college credit
- Access to rigorous coursework and expectations
- Alignment of developmental education with college-level courses
- Student-centered instruction (e.g., differentiation, active learning)
- Integrated reading and writing instruction
- Intensive practice on key reading and writing skills
- Support for noncognitive and study skills
- Use of peers to support learning
- Elimination of negative stigma around participation in DE
Early findings suggest RCT corequisites incorporate many of these promising practices

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<th>Ways in which corequisites are incorporating practices</th>
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<tr>
<td>Accelerating opportunities to earn credit</td>
<td>• Immediate entry into college-level course&lt;br&gt;• Reduction in overall DE credits required for college readiness which makes room on schedule for other courses</td>
</tr>
<tr>
<td>Exposure to high level of rigor</td>
<td>• Challenging coursework (e.g., limited skill-and-drill, advanced readings, full essays)&lt;br&gt;• High expectations for student work (e.g., mixed with college-level students)</td>
</tr>
<tr>
<td>Greater alignment of remediation to college coursework</td>
<td>• Shared learning objectives&lt;br&gt;• Common coursework&lt;br&gt;• Instructor alignment (e.g., same instructor teaching DE and college course, co-teaching, shared planning)&lt;br&gt;• Coordinated scheduling</td>
</tr>
<tr>
<td>Student-centered learning</td>
<td>• A number of opportunities for one-on-one support&lt;br&gt;• Tailoring of instruction to focus on individual areas of weakness&lt;br&gt;• Active learning and contextualization</td>
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| Integrated reading and writing instruction     | • Incorporating integrated reading and writing activities into curriculum  
• Assessing both reading and writing and providing support in all areas of need                                      |
| Intensive practice on reading and writing skills| • Remediation and college course completed in same term  
• Shortened term with more contact hours per week for course and/or support  
• More hours spent on homework                                                                                      |
| Use of peers to support learning               | • Mixing accelerated students with college-ready students  
• Developing learning communities  
• Incorporating group activities into the classroom                                                                      |
| Support for non-cognitive and study skills     | • Encouragement or requirements to use of existing instructional support (e.g., tutoring, office hours) that is available for all courses  
• Explicit focus on building these skills in the classroom                                                                |
| Elimination of negative stigma                 | • Designing corequisites to be less distinguishable as DE  
• Mixing accelerated students with college-ready students                                                                  |
Some practitioners raised concerns about areas where the RCT corequisites may fall short

Concerns that corequisites attached to English 1301:

- May be less likely focus on reading instruction relative to traditional DE
- May devote less time than traditional DE to building noncognitive and study skills
- May be less likely to incorporate active learning strategies, contextualization than traditional DE
- May be too rigorous in terms of content and expectations for students who are further from college ready

Corequisite models can be designed and implemented to address these concerns
Our next step is to examine additional data on these nine areas of implementation

• Are RCT corequisite students more likely to be exposed to promising practices than students in a standalone integrated reading and writing DE course?

• Is there variation in the implementation of promising practices across RCT models and colleges?

• Which of the promising practices are associated with positive impacts on student outcomes for RCT colleges?
Thank you!

For any questions, please contact:
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The research reported here was supported, in whole or in part, by the Institute of Education Sciences, U.S. Department of Education, through grants R305H170085 and R305N170003 to the American Institutes for Research and R305H150094 to the RAND Corporation. The opinions expressed are those of the authors and do not represent the views of the Institute or the U.S. Department of Education.