IMPROVING TEACHER PREPARATION FROM WITHIN: USING DATA TO VALIDATE AND IMPROVE PRACTICE-BASED PREPARATION OPPORTUNITIES
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DISCLAIMER

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PRACTICE-BASED TEACHER PREPARATION

- High leverage practices (HLPs) and select evidence-based practices (EBPs) serve as the curriculum
- Practice based preparation allows for the thoughtful implementation of HLPs and EBPs
PRACTICE-BASED PREPARATION

• Involves a **cohesive** and **carefully curated** set of practice opportunities designed to help preservice candidates acquire the curriculum.
INDIVIDUAL FEATURES OF THE OPPORTUNITIES

• Modeling
• Feedback
• Analysis
• Interleaving
OVERARCHING FEATURES

• Scaffolded
• Duration
• Cohesion
• Although practice-based preparation is generating enthusiasm, we still do not have programmatic evidence of its impact (Brownell, Benedict, Leko, Peyton, Pua, & Richards-Tutor, under review).

• And, we do not have systematic ways of collecting data that can be used to improve it!
IMPROVEMENT SCIENCE APPROACH

• To guide their efforts, teacher educators need ways of collecting data to design, implement, and improve their practice-based approaches
• And, to demonstrate that these approaches are having the desired impact
CSU LONG BEACH
URBAN DUAL CREDENTIAL PROGRAM

• Two year clinical residency-like program
• Earn both elementary and education specialist credential
• Undergraduate and post-bac options
• Grounded in MTSS Framework
• Strong Partnerships with school districts and schools
HLPS ADDRESSED

• HLP #1: Collaborate with professionals to increase student success
• HLP #6: Use student assessment data, analyze instructional practices, and make necessary adjustments that improve student learning
• HLP #12: Systematically design instruction toward a specific learning goal
• HLP #16: Use explicit instruction
• HLP #20: Provide intensive instruction
• HLP #22: Provide positive and constructive feedback to guide students’ learning and behavior
### EXAMPLE OF ONE PRACTICE BASED OPPORTUNITY: TIER 2/TIER 3 INTERVENTION

<table>
<thead>
<tr>
<th>Year 1, Semester 1</th>
<th>Year 1, Semester 2</th>
<th>Year 2, Semester 3</th>
<th>Year 2, Semester 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Clinical Practice Rounds)</td>
<td>(Clinical Practice Rounds)</td>
<td>(Student Teaching)</td>
<td>(Student Teaching)</td>
</tr>
<tr>
<td>• Collaboratively develop two tier 1 lessons with input from classroom teachers and faculty using lesson study approach</td>
<td>• Coursework in assessment and literacy (intervention)</td>
<td>• Coursework in Mathematics</td>
<td>• High leverage practices checklist for student teaching</td>
</tr>
<tr>
<td>• Teach lessons and receive feedback</td>
<td>• Collaboratively plan with “grade level team” small group intervention instruction for tiers 2/3</td>
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<td>• Apply intervention in “true context”, not for a course assignment</td>
</tr>
</tbody>
</table>

- **First lesson**: Basic comprehension skill, e.g., main idea
- **Second lesson**: More complex comprehension skill, e.g., compare and contrast

- **Critical Content: Reading** (PA, phonics, fluency, vocabulary or comprehension)
- **Critical Pedagogy**: data-driven decision making; intervention—direct instruction, corrective feedback

- **Critical Content: Mathematics** (number sense, word problems, algebra)
- **Critical Pedagogy**: data-driven decision making; intervention—direct instruction, corrective feedback
DATA COLLECTED TO INFORM REVISIONS
FIDELITY DATA: 2 YEARS

• Observation Protocol: modeling, many opportunities to respond, praise, corrective feedback

• Observed at least 20% of lessons

• Average fidelity scores from first intervention experience=93%
  Year 1: 82%-100%, Year 2: 71%-100%

• Almost all candidates improved to 100% by end of first intervention practice opportunity (4 weeks, 8 intervention lessons)
K-5 STUDENT DATA

• 88 percent of K-5 students in intervention made growth on at least one target skill from DIBELS assessments (reading).

• Younger students (K-1) made more growth than older students (2-5).
CANDIDATE INTERVIEWS

• Data helped individualize intervention
• Collaborating with classmates helped get ideas to use for my students
• Individualizing the intervention allowed me to meet students’ needs
• Conducting the intervention helped us to feel we were making a difference and helping students succeed
FURTHER CONSIDERATIONS FOR PROGRAM IMPROVEMENT

• Consider collecting same data for math intervention, but there are issues.

• Consider reliability across master teachers and university faculty related to intervention for the purpose of professional consensus and feedback.

• Develop/use a data guide to more strategically help candidates make decisions about instruction during collaborative team time (if school site uses one that directly aligns).
Project funded by the Ohio Dean’s Compact on Exceptional Children

Establish partnerships for teacher preparation through university-public school partnerships as contexts for mutually beneficial learning, or “simultaneous renewal” ¹

Project SUPPORT creates shared opportunities for teacher learning and development that are embedded in practical activities related to analysis of P-12 student behavioral outcomes

¹Goodlad (1994)
District priorities:

• Maintain excellence in teaching by developing data based decision-making skills
• Improve technology skills of staff
• Utilize expertise of Kent State faculty to improve instruction
• Use staff expertise to share knowledge and information through site based inservice
• Improve staff classroom management skills
• Reduce use of punitive disciplinary practices, such as suspension
<table>
<thead>
<tr>
<th>Instructional Foci By Year</th>
<th>Learning Objectives</th>
<th>Practice-Based Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Y1</strong> School Systems, Instructional</td>
<td>Professional Problem Solving &amp; Collaboration, Content Knowledge</td>
<td>Teaming, Co-teaching, Peer Tutoring</td>
</tr>
<tr>
<td>Planning &amp; Delivery Models</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Y2</strong> Universal Instruction and Supports</td>
<td>Evidence-based &amp; High Leverage Practices</td>
<td>Classroom Management, Whole Group Instruction</td>
</tr>
<tr>
<td><strong>Y3</strong> Selected Instruction and Supports</td>
<td>Data Literacy, Risk Assessment, Early Warning Signs</td>
<td>Small Group Instruction</td>
</tr>
<tr>
<td><strong>Y4</strong> Intensive Instruction and Supports</td>
<td>Data-based Individualization</td>
<td>Evaluation Team Reports/Individualized Education Programs, 1:1 Instruction</td>
</tr>
<tr>
<td>HLP Addressed</td>
<td>Strategy Taught</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| 1. Collaborate with Professionals to Increase Student Success in the General | • OIP within Teacher-Based Teams  
| Education Curriculum (Collaboration)                                         | • Communication Skills                                                         |
| 5. Communicate Assessment Information with Stakeholders to Collaboratively  | • Using Terminology with Assessment                                           |
| Design Educational Programs (Assessment)                                      | • Data Interpretation                                                          |
| 6. Use Assessment Continuously to Design, Evaluate, and Adjust Instruction    | • Setting Assessment Purpose                                                   |
| that is Responsive to Students’ Needs (Assessment)                           | • Designing Data Collection Protocol                                           |
| 8. Provide Appropriate Rates of Positive and Constructive Feedback to Guide  | • Using Data to Monitor Student Progress                                       |
| Students’ Learning and Behavior (Social-Behavioral)                          | • Adjusting Instruction Based on Data                                          |
| 18. Use Strategies to Promote Active Student Engagement (Instructional)      | • Using Technology for Data Collection                                         |
| 19. Use Assistive and Instructional Technologies (Instructional)             |                                                                                  |
|                                                                              | • Behavior-Specific Praise                                                     |
|                                                                              | • Pre-Correction                                                               |
|                                                                              | • Instructional Feedback                                                       |
|                                                                              | • High-p Requests                                                             |
|                                                                              | • Behavior Contracts (Tier II)                                                  |
|                                                                              | • Opportunities to Respond                                                     |
|                                                                              | • Active Supervision                                                           |
|                                                                              | • Incorporating Choice                                                         |
|                                                                              | • Self-monitoring with Mobile Applications (Tier II)                           |
ENGAGEMENT STRUCTURE

• Student pairs rotate across pods/grade levels to cooperating teacher “strategy experts” every 3 weeks
  • Per teacher – 2 preventive, 1 responsive CM strategy
  • 10 total CM strategies (8 preventive, 2 responsive)

• Strategies selected by pods based on data review, re-evaluated each semester

• Teacher & faculty set time for weekly data review meetings

• Faculty available on-site during practice sessions for observations/consultation

• Students receive, in total, immersive instruction and practice across grade levels with 8 universal, low-intensity CM strategies, while practicing skills associated with 6 HLPs
REVISIONS MADE DURING AND AFTER IMPLEMENTATION

• Data revealed "corrective feedback" was element most often not used. Individual candidates discussed more in class had it modeled as they delivered intervention.

• Interviews revealed data analysis helped learn to individualize. We tightly aligned assessment and intervention courses to better support this skill.

• K-5 data indicated older students made less growth. Spent additional time on content related to higher level decoding and reading comprehension interventions.

• Based on interviews we provided candidates more structured opportunities in assessment and intervention courses to collaborate.
CANDIDATES’ OBSERVED USE OF PRACTICES

- Use of practices and associated change in instances of off-task behavior
- Percentage decrease in classroom off-task behaviors by strategy implemented by candidate (aggregated across 16 candidates)
  - Pre correction 7.9%
  - Opportunities to Respond 21.7%
  - High Probability Request Sequences 10.6%
  - Actionable Feedback 23.1%
  - Behavior Specific Praise 11.3%
RELATION TO SCHOOL-WIDE ODR DATA

ODR by Ethnicity

ODR by Grade Level

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
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<tbody>
<tr>
<td>Black</td>
<td>54</td>
<td>4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Multiracial</td>
<td>20</td>
<td>129</td>
</tr>
<tr>
<td>White</td>
<td>110</td>
<td>199</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>46</td>
<td>45</td>
</tr>
<tr>
<td>7</td>
<td>72</td>
<td>61</td>
</tr>
<tr>
<td>8</td>
<td>67</td>
<td>94</td>
</tr>
</tbody>
</table>
Teachers and candidates completed Usage Rating Profile-Intervention (UPR-1) after learning each practice during PD training, and at semester's end.

Six factors of analysis for each practice:

- Acceptability*
- Understanding*
- Home-School Collaboration
- Feasibility*
- System Climate
- System Support

"Strongly disagree" (1) to "Strongly Agree" (6) Scale
Focus Groups

Teachers

Practice opportunity should be a dedicated course – allowing for more time for observation and getting acclimated to students and the content.

• “If I had a recommendation, I think this should be done in a student teaching or some sort of long term experience so they can one, know the teacher, two, know the students, three, know the content”
FOCUS GROUPS

Candidates

Noted [it] would be better as a dedicated field experience course.

  • “….because we don’t have a class on classroom management I feel more equipped now to go into Field II and student teaching.”

  • “I feel like all in all this field experience was like a much needed one especially since like behavior issues in the classroom is like the number one thing to make teachers not to be teachers anymore”
LIMITATIONS

Priority was professional development and training

Design limitations
- Small sample (n = 6 teachers, 18 candidates)
- Training done simultaneously for all teachers
- Each teacher self-selected as a “strategy expert” (e.g. non-random)

Data Collection
- Responsive strategies (e.g. Precision Requests) had to be preceded by a problematic behavior - > which did not occur consistently
- Difficulty reaching 80% criteria on Inter-observer agreement
DATA-BASED REVISIONS

• SUPPORT now operates as an independent course during Year 2 of program

• Each student (n=26) works with a participating pod in two 4-week cycles, focusing on three strategies per cycle
DATA-BASED REVISIONS

Each cycle includes:

- Observation of teachers using specific classroom management strategies
- Planning a brief lesson with team that includes opportunity to incorporate the strategy
- Teaching brief lesson in which the specific strategy is practiced
- Observing and collecting data on a peer during teaching demonstration (using app)
- Working with teachers to analyze data that was collected during teaching demonstration
- Completing online activities using Powerschool™ LMS
CONCLUSIONS

• Programs were clear about the instructional practices (EBPs and HLPs) they wanted teacher candidates to demonstrate

• Had clear theories about how those practices would develop; the theories were research based

• Used data to refine program
CHALLENGE

• This is intellectually demanding and logistically challenging work.
IMPROVEMENT SCIENCE IN TEACHER EDUCATION

Requires a more comprehensive approach to program development and study.

• Where is the place for this sort of scholarship?
• How do we ensure that the work we are doing has merit and is rigorous?
• How can we ensure it adds to the advancement of our knowledge in teacher education?
• How can we educate chairs and administrators about its importance?