

# Putting HLPs into practice: Strategies, partnerships, and evaluation

# Panel Members

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# USING MIXED-REALITY SIMULATION TO TEACH HIGH LEVERAGE PRACTICES

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# Agenda

- Providing Purposeful Practice for HLPs
- Mixed Reality Simulations
  - *What, Why, How*
- Examples of Use
- Tools and Strategies to Consider
- Closing Questions

# High Leverage Practices

- HLPs are identified as **specific teacher practices** that are likely to result in **improved student outcomes**.



# What to Consider



How do pre- and inservice teachers demonstrate their knowledge, skills, and dispositions?

# Providing Practice

- Teacher candidates need opportunities to practice their craft in **structured, scaffolded, and supervised experiences** (Leko, Brownell, Sindelar, & Kiely, 2015).
- In your experience, what are the pros & cons of role plays?



# Issues of Time & Feedback





# Simulated Practice

- Simulations allow individuals to **learn and master new skills** in an **environment that does not put others** (e.g., students) or relationships at **risk** (Dieker et al., 2014).
- Simulations enable candidates **to practice decision-making** and **receive feedback on decisions** through virtual responses and peer observers (Brown, 2000).

# Simulated Practice

- The use of simulations is a **well-validated approach** for students in fields **outside of education** such as military and medical training (McGaghie, Issenberg, Petrusa, & Scalese, 2010).



# Mixed Reality Simulations

- Similar to flight simulator training used for pilots before they fly an actual airplane
- Bridge: Intermediary step to practice new skills with avatars (students and adults, e.g., co-teachers, parents, administrators...) before or alongside implementing in the field – never a replacement
- Practice complex social interactions



# How does it work? How is this different from virtual reality? MRS is powered by a blend of . . .

Artificial Intelligence

+

Human Intelligence



## ***“Human-in-the-loop” paradigm***

Simulation specialists orchestrate the verbal and nonverbal interactions between avatar-based characters and the trainee *during* the simulation.

More authentic interactions than virtual reality

- Activates the neural pathways required to turn new skills into daily routines
- Provides a safe environment for feedback and coaching





# Meet the Adults



# Meet Dani



Mixed-Simulation Partner: Mursion®



# Meet the Students



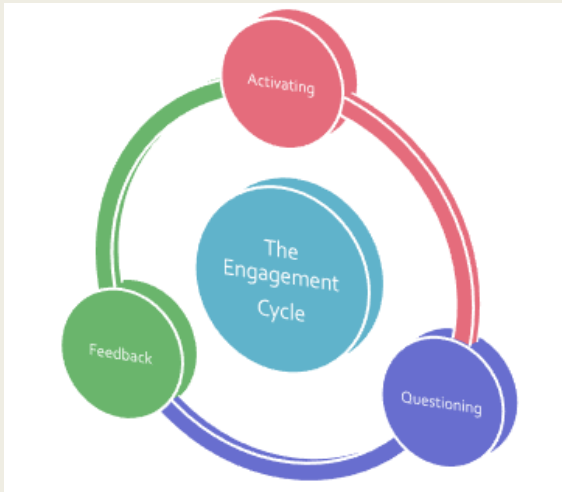
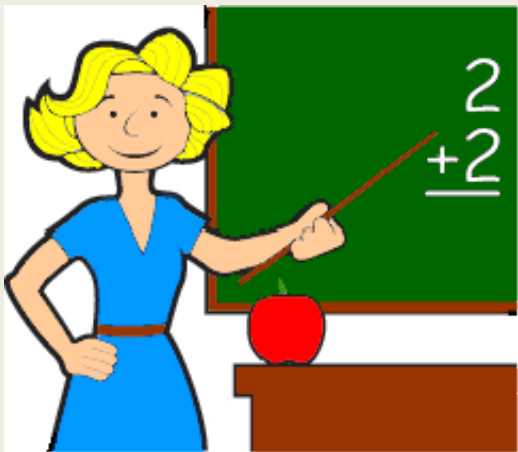


# What makes a good teacher?





# Practicing HLPs



- Avatars with diverse learning needs
- Performance-based assessments
  - Gateway assessments







In today's session, you will be transitioning the class from an independent drawing activity to a class discussion about the concept of Social Awareness, one of the five core competencies of Social and Emotional Learning from CASEL.

**Performance objectives:** You have up to 12 minutes to complete this activity.

- 1. Transition all 5 students away from writing activity in an engaging and positive way within the first 3 minutes.
- 2. Introduce the concept and definition of Social Awareness in an engaging and easy to understand way. Lead a discussion with all 5 students. Two to three of the students, including Nate, should provide at least one appropriate personal example of a time when they showed, or could have shown, social awareness.





## **BEHAVIOR MANAGEMENT**

You are a recent college graduate, and while you are strong in your content area, you have never taught a group of middle school students. Your objective is to establish rapport while you set expectations. You have three minutes to learn something about the students while you establish classroom routines related to asking questions.

## **TEACHER – PARENT CONFERENCE**

You are a teacher of Ed, a 7th grader who usually has good scores in math. Lately, his math grades have been low. His mother, Stacey Lewis, has scheduled a conference to discuss his academic progress.

# How to create a scenario

- Identify Target Learning Objectives (1-2)
  - *Identify Session Outcomes*
  - *Key Learning Experiences*
  - *Deciding Context*
  - *Planning to Provide Feedback*
- No more than 7-10 minutes in length
- Always run an “orientation” session prior to conducting the actual simulations

# Tools and strategies to consider when planning for embedding mixed reality into your courses



# Reflections from students

## Mixed reality nerves

- *I cannot speak for everyone but I also felt nervous and anxious because I could not predict how the meeting would operate with Stacey. On the other hand, this was a good stress, because I am sure that experienced educators already in the field experience this level of anxiety before an important meeting*

# Reflections from students

## Increased confidence during a new experience

- *I loved the idea of being able to tag someone in. I felt confident in the moment knowing that if I needed to someone could jump in. This allowed me to be engaged with the parent.*
- *I liked the idea of working with a team, because when you are in an IEP meeting you are working with a team. It let you get the experience of how you can work with your team members.*



# Reflections from the professors (us)

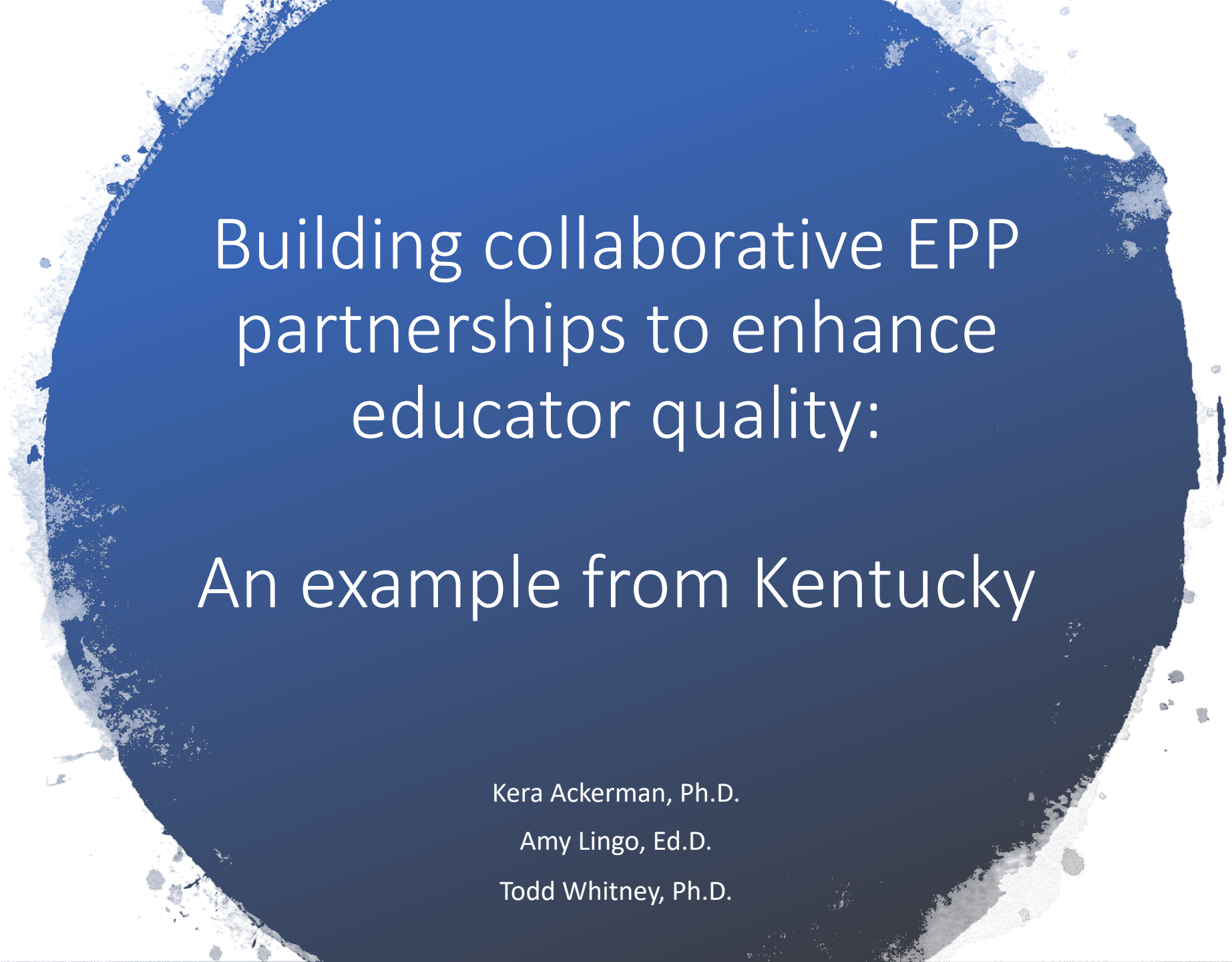
- Avatars give us common characters and shared experience “in the field” to anchor our discussion to during simulations...and beyond
- Strength and trajectory of conversation and feedback during the “pause” and “feedback” sessions
- Allows us to tap into disposition of our students in the classroom prior to practicum
- Time and \$\$





## Contact us

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Building collaborative EPP  
partnerships to enhance  
educator quality:

An example from Kentucky

Kera Ackerman, Ph.D.

Amy Lingo, Ed.D.

Todd Whitney, Ph.D.

Initial Effort



University of  
Louisville



University of  
Kentucky



Thomas More  
University



# Building Collaborative Partnerships Statewide: Kentucky Excellence in Educator Preparation



# KEEP SUMMIT



- Evidence-Based Practices
- High-Leverage Practices
- Fieldwork & Clinical Practice-based Experiences
- Culturally Responsive Teaching & Equity
- Family Engagement
- District Partnerships
- Recruitment & Retention of High Quality Teachers
- Accreditation & Program Improvement

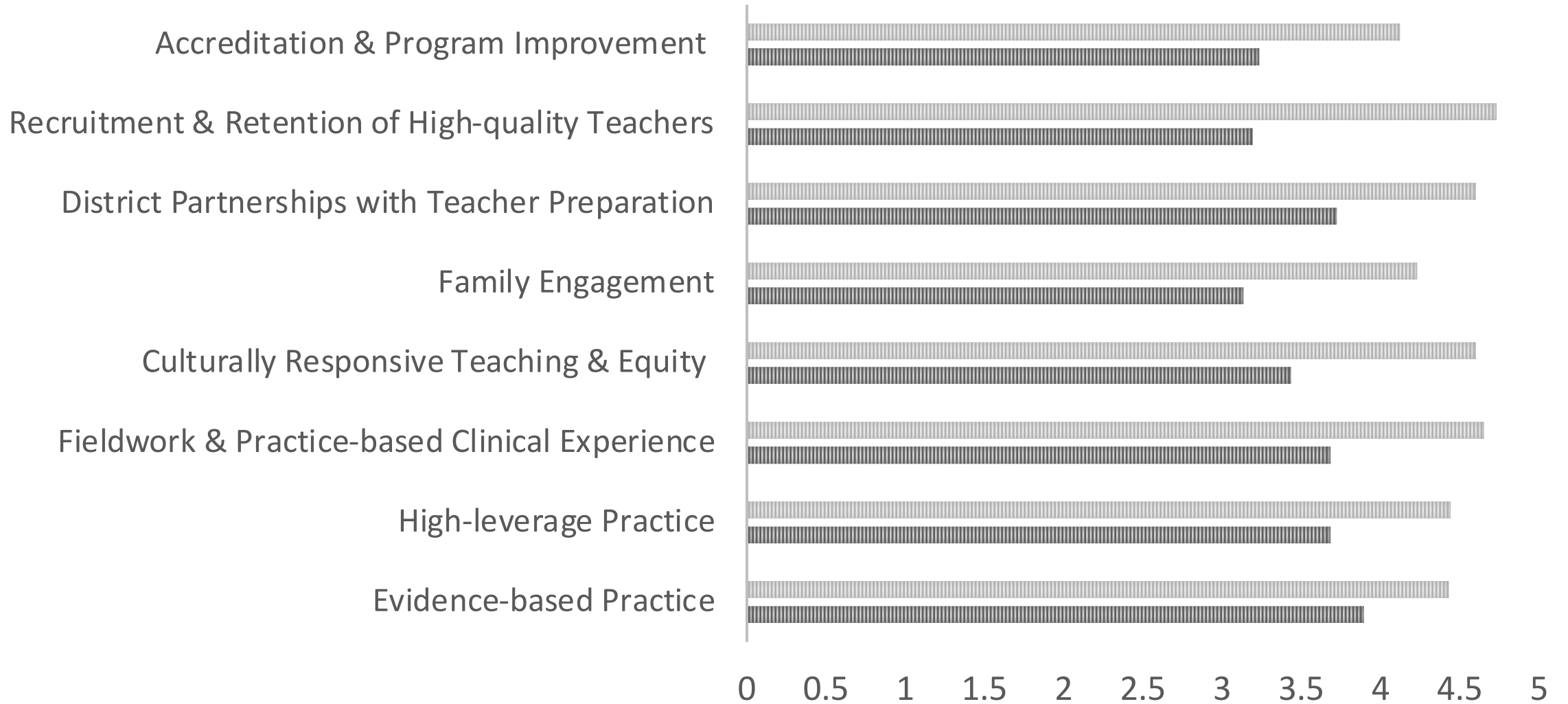
Table 1. *Mean and standard deviations of perceived knowledge and importance of variables in reimagining teacher education in Kentucky.*

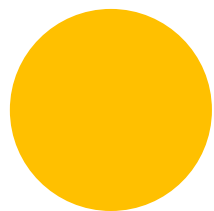
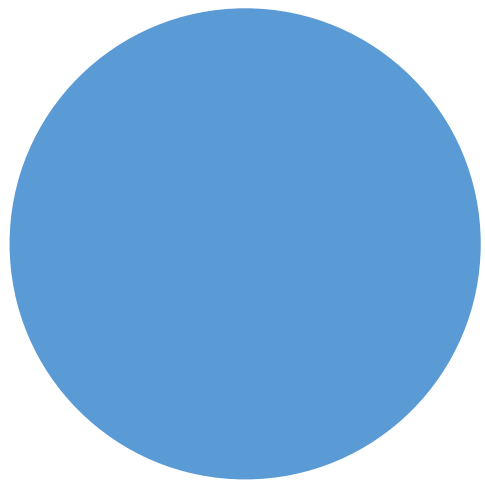
Variable	Knowledge		Importance	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>Evidence-Based Practice</b>	3.89	.91	4.43	.77
<b>High-Leverage Practice</b>	3.68	.98	4.44	.82
<b>Fieldwork and practice-based clinical experience</b>	3.68	.93	4.65	.53
<b>Culturally responsive teaching and equity</b>	3.43	.81	4.60	.61
<b>Family Engagement</b>	3.13	1.00	4.23	.72
<b>District partnerships with teacher preparation</b>	3.72	.86	4.60	.58
<b>Recruitment and retention of high-quality teachers</b>	3.19	.88	4.73	.49
<b>Accreditation and program improvement</b>	3.23	.99	4.12	.94

*Note.* Extremely (5); very (4); moderately (3); slightly (2); not at all (1)



▨ Importance    ▨ Knowledge



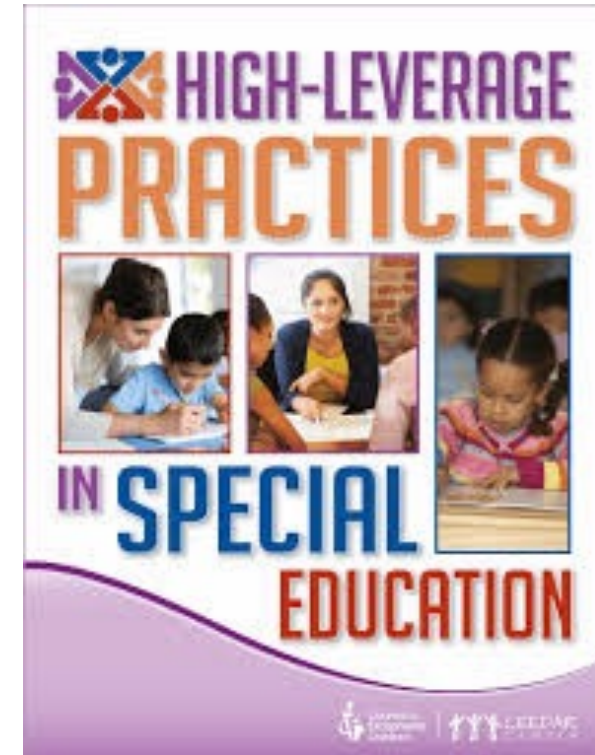
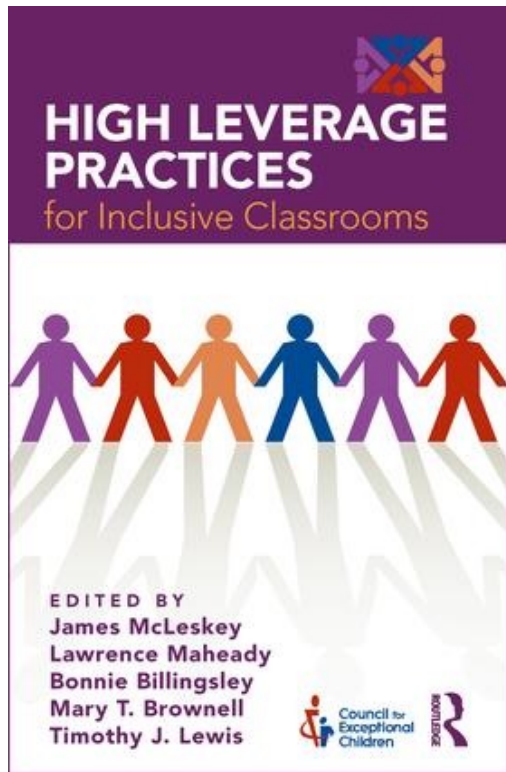


Next Steps:  
Blueprint for Growth

# Leveraging Resources



- KEEP Summit – Identified needs:
  - Common message
  - University workgroups (within & between)
  - Greater participation from all EPPs
- K-KEEP research group within KACTE
  - Means to engage additional EPPs



# Existing State Structures

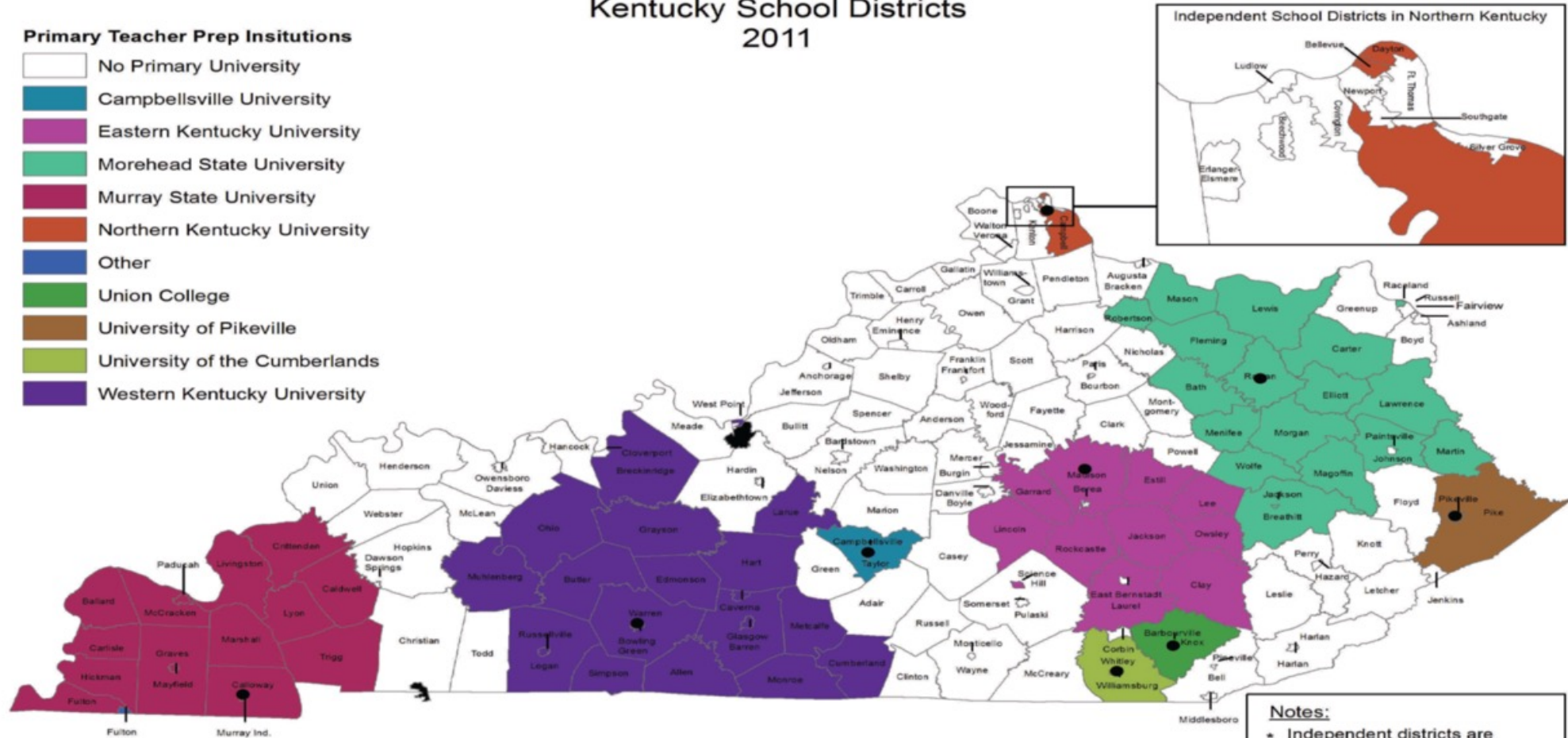
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## IHE Special Education Consortium

# Primary Teacher Preparatory Institutions of Employed Teachers in Kentucky School Districts 2011

## Primary Teacher Prep Insitutions

- No Primary University
- Campbellsville University
- Eastern Kentucky University
- Morehead State University
- Murray State University
- Northern Kentucky University
- Other
- Union College
- University of Pikeville
- University of the Cumberlands
- Western Kentucky University



**Notes:**

- \* Independent districts are identified within county.
- \* Military bases are shown in black.
- \* Insitutions that have teacher prep programs, but do not serve >50% of a district are not included.



## Building Capacity

- **Murray State University:** Enhance Culturally Responsive Teaching through practice based opportunities & increase understanding of HLP & EBP through aligning curricula
- **Western Kentucky University:** Enhance clinical partnerships through PDs on HLP
- **Campbellsville University:** Enhance HLP & EBP through practice based opportunities, observation guides, lesson studies, video analysis, and tutoring
- **Asbury University:** Enhance Culturally Responsive Teaching through practice based opportunities in rural and urban districts
- **Georgetown College:** Enhance HLP & EBP through video observation





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

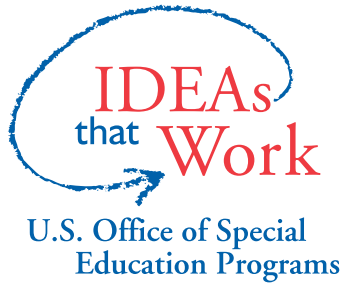
# PRESENTERS

- Mary T. Brownell, CEEDAR Director, University of Florida
- Amber Benedict, University of Florida
- Melinda Leko, Chair, University of Wisconsin Madison
- Cara Richards-Tutor, California State University at Long Beach
- Brian R. Barber, Kent State University





# 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  
DR. CARA RICHARDS-TUTOR

# 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

Year 1, Semester 1 (Clinical Practice Rounds)	Year 1, Semester 2 (Clinical Practice Rounds)	Year 2, Semester 3 (Student Teaching)	Year 2, Semester 4 (Student Teaching)
<ul style="list-style-type: none"> <li>• Collaboratively develop two tier 1 lessons with input from classroom teachers and faculty using lesson study approach</li> <li>• Teach lessons and receive feedback</li> </ul>	<ul style="list-style-type: none"> <li>• Coursework in assessment and literacy (intervention)</li> <li>• Collaboratively plan with “grade level team” small group intervention instruction for tiers 2/3</li> </ul>	<ul style="list-style-type: none"> <li>• Coursework in Mathematics</li> <li>• Collaboratively plan with “grade level team” small group intervention instruction for tiers 2/3</li> </ul>	<ul style="list-style-type: none"> <li>• High leverage practices checklist for student teaching</li> <li>• Apply intervention in “true context”, not for a course assignment</li> </ul>
<ul style="list-style-type: none"> <li>• First lesson: Basic comprehension skill, e.g., main idea</li> <li>• Second lesson: More complex comprehension skill, e.g., compare and contrast</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Content: Reading (PA, phonics, fluency, vocabulary or comprehension)</li> <li>• Critical Pedagogy: data-driven decision decision making; intervention—direct instruction, corrective feedback</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Content: Mathematics (number sense, word problems, algebra)</li> <li>• Critical Pedagogy: data-driven decision decision making; intervention—direct instruction, corrective feedback</li> </ul>	

# DATA COLLECTED TO INFORM REVISIONS



# REVISIONS MADE DURING AND AFTER IMPLEMENTATION

- Observations showed that "corrective feedback" was used infrequently...focused on this element as a class and modeled it again. Individual candidates had it modeled as they delivered intervention.
- Candidate interviews showed focus on individualizing instruction was helpful (yay!); thus, we better aligned the assessment and intervention courses to strengthen candidates' ability to improve instruction.
- K-5 data indicated older students grew less. We decided to spend additional time on higher level decoding and reading comprehension interventions
- Candidate interviews resulted in more structured opportunities in assessment and intervention courses to collaborate.





CEEDAR  
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KENT STATE UNIVERSITY  
DR. BRIAN R. BARBER





## SCHOOL-UNIVERSITY PARTNERSHIP TO PROMOTE TRAINING IN EFFECTIVE CLASSROOM MANAGEMENT

Project funded by the Ohio Dean's Compact on Exceptional Children

Establish partnerships as contexts for mutually beneficial learning, or “simultaneous renewal” <sup>1</sup>

Used district priorities, HLPs, low-intensity CM strategies as guiding frameworks

Practice activities related to analysis of P-12 student behavioral outcomes

<sup>1</sup> Goodlad (1994)





# HLPS IN PRACTICE

HLP Addressed	Strategy Taught
1. Collaborate with Professionals to Increase Success in the General Education Curriculum (Collaboration)	<ul style="list-style-type: none"> <li>• OIP within Teacher-Based Teams</li> <li>• Communication Skills</li> </ul>
5. Communicate Assessment Information with Stakeholders to Collaboratively Design Educational Programs (Assessment)	<ul style="list-style-type: none"> <li>• Using Terminology with Assessment</li> <li>• Data Interpretation</li> </ul>
Use Assessment Continuously to Design, Evaluate, and Adjust Instruction that is Responsive to Students' Needs (Assessment)	<ul style="list-style-type: none"> <li>• Setting Assessment Purpose</li> <li>• Designing Data Collection Protocol</li> <li>• Using Data to Monitor Student Progress</li> <li>• Adjusting Instruction Based on Data</li> <li>• Using Technology for Data Collection</li> </ul>
8. Provide Appropriate Rates of Positive and Constructive Feedback to Guide Students' Learning and Behavior (Social-Behavioral)	<ul style="list-style-type: none"> <li>• Behavior-Specific Praise</li> <li>• Pre-Correction</li> <li>• Instructional Feedback</li> <li>• High-p Requests</li> <li>• Behavior Contracts (Tier II)</li> </ul>
18. Use Strategies to Promote Active Student Engagement (Instructional)	<ul style="list-style-type: none"> <li>• Opportunities to Respond</li> <li>• Active Supervision</li> <li>• Incorporating Choice</li> </ul>
19. Use Assistive and Instructional Technologies (Instructional)	<ul style="list-style-type: none"> <li>• Self-monitoring with Mobile Applications (Tier II)</li> </ul>



# ENGAGEMENT STRUCTURE

Student pairs rotate across pods/grade levels to cooperating teacher “strategy experts” every 3 weeks

- Per teacher – 2 CM strategies

- 6 total CM strategies (5 preventive, 1 responsive)

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 6 universal, low-intensity CM strategies, while practicing skills associated with 6 HLPs



# PILOT RESULTS: CANDIDATES' USE OF PRACTICES

Candidates assessed use of practices and associated change in instances of off-task behavior

Percentage decrease in classroom off-task behaviors by strategy (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%



# PILOT RESULTS: TEACHER & CANDIDATES' RATINGS OF PRACTICES

Teachers and candidates completed Usage Rating Profile-Intervention (UPR-1)<sup>1</sup> after learning each practice and at semester's end

Three factors assessed for each practice ["Strongly disagree" (1) to "Strongly Agree" (6)]:

Understanding: T (M=5.9); C (M=5.7)

Acceptability: T (M=5.3); C (M=5.9)

Feasibility: T (M=4.8); C (M=5.2)

<sup>1</sup> Chafouleas, Briesch, Riley-Tillman, & McCoach (2009)



## PILOT RESULTS: TEACHER / CANDIDATE FOCUS GROUPS

Teachers: should be a dedicated course – allow 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”*

Candidates also 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”*





# DATA BASED REVISIONS

Instructional Foci By Year		Learning Objectives	Practice-Based Activities
Y1	School Systems, Instructional Planning & Delivery Models	Professional Problem Solving & Collaboration, Content Knowledge	Teaming, Co-teaching, Peer Tutoring
Y2	Universal Instruction and Supports	Evidence-based & High Leverage Practices	Classroom Management, Whole Group Instruction
Y3	Selected Instruction and Supports	Data Literacy, Risk Assessment, Early Warning Signs	Small Group Instruction
Y4	Intensive Instruction and Supports	Data-based Individualization	Evaluation Team Reports/Individualized Education Programs, 1:1 Instruction



# DATA-BASED REVISIONS

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

Student work with participating pod in two 4-week cycles (three strategies per cycle)

Each cycle involves:

- Observation of teachers using specific classroom management strategies
- Planning and teaching a brief lesson with team to incorporate the strategy
- Collecting peer data during teaching demonstration (using app)
- Working with teachers to analyze collected data
- Completing online activities using Powerschool™ LMS



## IN SUMMARY

- 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
- Constructed data collection to better understand how teachers were understanding and using practices
- Used data to refine program



# CHALLENGE ACROSS THE THREE PANELS

- This is intellectually demanding and logistically challenging work.



## SOME QUESTIONS TO PONDER

- Are you and your colleagues incorporating HLPs combined with carefully crafted practice opportunities into your programs? How are you doing this?
- What supports would your EPP or LEA need to engage in this work?
- What are ways to reach LEAs that may not have direct partnerships with universities due to location?
- How do we ensure that the work we are doing has merit, is rigorous, and advances our knowledge base in teacher education?

