Contact: Sarah Cohen (session moderator)
Title: Utilizing Improvement Science to Strengthen an Urban Teacher Residency Program
Section: Innovations in Teacher Preparation & Education (Invited Session)
Panel Participants:

- BreAnna Evans-Santiago, California State University, Bakersfield, bevans9@csub.edu
- Brandon Ware, Bakersfield City School District, wareb@bcsd.com
- Holly Gonzales, California State University, Bakersfield, hgonzales@csub.edu
- Sarah Cohen, National Center for Teacher Residencies, scohen@nctresidencies.org

Panel Justification:

Researchers have identified five specific challenges that Teacher Preparation Programs (TPPs) need to address: 1) a sparsity of teacher candidates of color and candidates with high GPAs; 2) a limited amount of interaction between effective K12 teachers and pre-service teachers; 3) too few of graduates to staff high-needs content areas (i.e. math, science, and special education, and English Language Learners); 4) a deeper alignment of resources to support induction for graduates; and 5) lack of an avenue to determine the TPP's impact on graduates' teacher effectiveness (Berry, Montgomery, Snyder, & Center for Teaching Quality, 2008). Given the literature base, challenges facing many TPPs, and a review of our own institution's completer data, we created an urban residency teacher preparation program to better align with the district's needs.

While a lot is known about the elements of a quality residency program (NCTR, 2014), implementing these ideas with fidelity within a specific context requires TPPs to consider the needs of the district and - most importantly - the K-8 students that the program prepares residents to teach. According to Grossman (2010), residences help minimize the disconnect between universities and school districts. Given the wide variation in the quality of TPPs, improvement science is a promising methodological approach for ensuring all teachers are well-prepared to enter the profession.

Over the last seven years, the Carnegie Foundation for the Advancement of Teaching has worked to adapt quality improvement concepts, methods, and tools from healthcare to work in educational settings (e.g., Bryk, Gomez, Grunow, & LeMahieu, 2015). To this end, improvement science provides a methodological approach for ensuring the best research knowledge is systematically integrated into the development of a high quality TPP residency. Carefully selecting training school sites with rich learning environments leads to continuous collaboration among universities and districts and may improve the alignment between mentor and supervisor feedback. Data are collected throughout the residency programs, which creates more robust opportunities for continuous improvement. This invited session panel will share how an urban teacher residency program utilized improvement science in order to make systematic changes to their program to better prepare residents for the K-8 classroom.

Background

According to the 2016 Secretary of Education report, the number of low-performing teacher preparation programs (TPPs) has more than doubled in the past 10 years. Scholars have estimated that more than 150,000 educators will begin their teaching careers inadequately prepared (DeMonte, 2016). Given the 2016 report, challenges facing many TPPs, and a review of our own institution's completer data, we created an urban residency teacher preparation program to better align with the district's needs. With financial support provided by a philanthropic foundation, and technical assistance from the National Center for Teacher Residencies, WestEd, and SRI, the urban teacher residency implemented the following components for the university and district personnel:

1. Use data to identify content areas of need,
2. Provide clinical experiences for primary (K-2)/intermediate (3-5) STEM-focused elementary placements,
3. Co-construct resident expectations, practices, and supports,
4. Identify and execute on opportunities for improvement and programmatic changes, as captured in data agreement.

As part of this work, we utilized improvement science's data-driven approach to support one of our program goals (Health Foundation, 2011). The university conducted the Plan-Do-Study-Act (PDSA) cycle (Langley, Moen, Nolan, Nolan, Norman & Provost, 2009) throughout the year, in order to analyze data. The data collected analyzed the frequency and scores of the Danielson Rubric observations, a mid-year survey, journey maps, and an end-of-the-year survey. As results from various data emerged, additional goals surfaced and a new cycle began. It was through this process that our team studied resident observations and mentor feedback.

Purpose

The purpose of this panel is to address how members of the program team - a subset of faculty and staff from the university and school district - analyzed residents' observation and perception data, in order to identify and improve programmatic processes within their residency. As the program team employed improvement science techniques, they noticed a large variation in mentor feedback and resident observations. The team then leveraged improvement cycles to dive deeper into the data, in order to determine the next steps and goals for the program, including revising the electronic observation rubric and implementing new protocols to review the frequency of observations.

Setting

Each resident observation occurred in a K-8 classroom setting as the assigned mentor teacher and/or university supervisor observed and evaluated the resident's performance using the Danielson rubric.

Participants

There are two groups of participants: 1) program residents; and 2) the mentor teachers and university supervisor who observe residents in K-8 classrooms.

- **Resident Demographics:** Observation data for all 17 residents enrolled in the residency program were analyzed.

- **Mentor Teacher Demographics:** There were 24 mentor teachers assigned to residents. The mentors were expected to observe the residents bi-weekly.
- **University Supervisor Demographics:** One university supervisor observed all 17 residents for the urban teacher residency and was expected to conduct 6 observations for each resident.

Processes that Impact

There are numerous programmatic processes that impact the one-year residency program. Given that residents' skills, knowledge, and performance are vital to the success of the program and their ability to be effective teachers, there are various data collections that take place. For the purposes of this panel discussion, panelists will share the data collected on one of the programmatic processes, specifically focused on resident observations and feedback.

1. **Performance Observations**
   Throughout the year, residents were evaluated by their assigned mentor teachers and university supervisor. Each resident received written and/or verbal feedback for every formal observation. The electronic forms were reviewed by the program team to analyze overall trends, residents' areas of success, and identify residents' areas of improvement.
2. **Resident Surveys**
   Mid-year and end-year surveys were administered in order to gain greater insight into residents' observation scores. This perception data provided the program team with more information on their processes and areas of the residency that could be strengthened.
3. **Journey Maps**
   As residents progressed through the program, they completed journey maps to highlight positive and/or negative moments, events, or ideas that stood out to them. The maps served as another perception data point that the program team reviewed as part of its improvement work.

Research Design and Data Collection

When approaching change, it is important to recognize that "all improvement requires change, but not every change results in an improvement" (Langley et. al, 2009, p. 136). Utilizing the PDSA cycles within improvement science provides a strong foundation for implementing change (Langley et. al, 2009). During the 2016-2017 academic year, resident performance scores on the Danielson rubric, resident surveys, and journey maps were analyzed to see if there were any trends or variations in programmatic processes. The rubric and survey data were collected electronically, while the journey maps were submitted anonymously to one of the residency program leads. With support from leaders associated with the New Generation of Educators Initiative and National Center of Teacher Residencies, the residency program team created a goal to reduce the variations in mentor feedback and the frequency of observations. Once the goal was established, the team implemented small, observable actions, such as adding a date and time stamp to the electronic observations, and studied the results from the implementation. Depending upon the results, the team moved forward with revisions or established new goals.

Findings

The findings from the data indicated: 1) inconsistent frequency of feedback from mentors; 2) a lack of clarity of when the observation occurred; and 3) inconsistency in feedback given to residents. In order to improve these areas, the program team decided to: 1) review expectations for the number of mentor observations and add a checkpoint to make sure observations were submitted; 2) add a date and time stamp to the electronic observation date; and 3) continue to provide training to ensure mentor and university supervisor feedback is in alignment.

Conclusions

The implementation of PDSA cycles not only provided vital programmatic feedback for the program but also highlighted processes which had a high degree of variation. By identifying the processes with high variation and then revising the procedures to address the findings, the residency program team believes that residents will be better prepared to teach in K-8 classrooms.

References

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