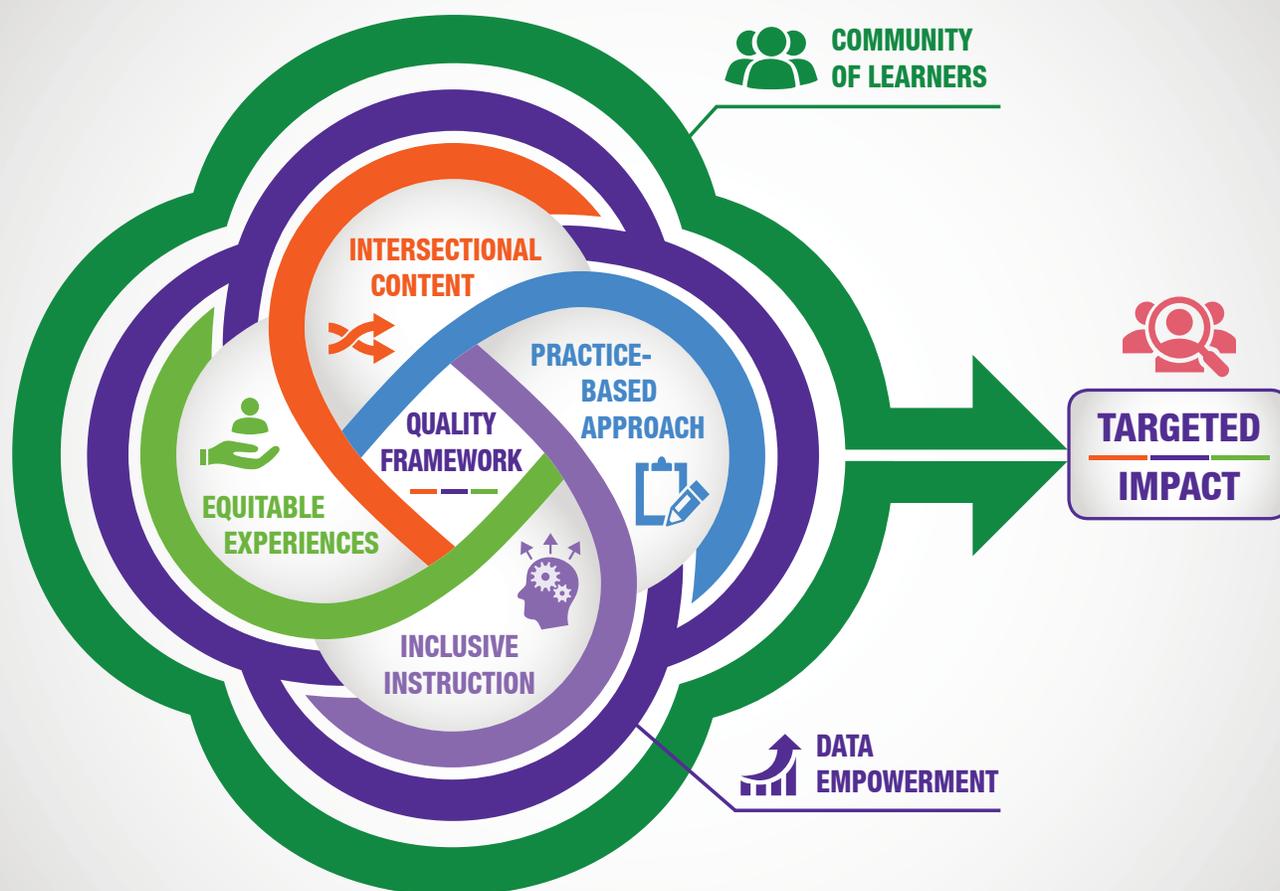


BRIEF: Data Empowerment



A Higher Standard

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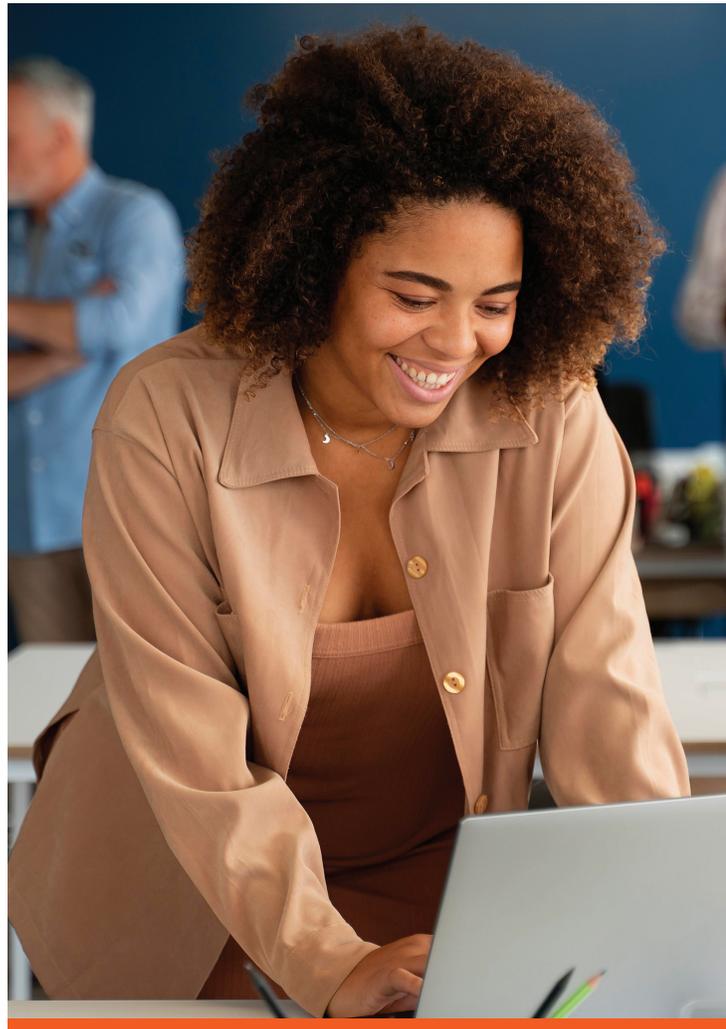
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Branch Alliance for Educator Diversity (BranchED)

Branch Alliance for Educator Diversity, or BranchED, is the only non-profit organization in the country dedicated to strengthening, growing, and amplifying the impact of educator preparation at Minority Serving Institutions (MSIs), with the longer-range goals of both diversifying the teaching profession and intentionally addressing critical issues of educational equity for all students. Our vision is for all students to access diverse, highly effective educators.

This goal is accomplished through application of our *Framework for the Quality Preparation of Educators*¹ (the Framework), which outlines a roadmap to create teacher preparation programs that meet the needs of our increasingly diverse student body. The Framework seeks to build equity-oriented educator preparation programs that prepare educators to reflect, respect, and reify the value of the diversity of America's PK-12 school children. It offers educator preparation providers (EPPs) a common vision of what high quality, culturally sustaining educator preparation is, and a coherent and sustained approach to implementing evidence-based practices that accomplish vitally important educational equity work.





BranchED Framework for Quality Preparation of Educators

BranchED created the first and only evidence-based framework for the quality preparation of teachers which addresses diversity as a fundamental component of quality. While we assert that each institution has a unique context, we believe that certain key elements are fundamental across all programs, such as: mutually beneficial partnerships with PK-12 and community stakeholders; a coherent, content-rich curricula; culturally and linguistically relevant and sustaining pedagogy; scaffolded and authentic opportunities for practice; genuine community engagement, and equitable opportunities for students to thrive. BranchED’s framework is the lens through which we support EPPs’ continuous improvement and innovation efforts. It is the bedrock of all the organization’s activities.

The Framework was developed through a multi-state process that began in the summer of 2016 and proceeded through the end of 2018. This included a review of the literature on existing practice in teacher preparation and an array of one-on-one interviews with over 50 faculty and leaders of EPPs, representatives of advocacy organizations, teacher groups, and state program approval and licensure department personnel. Subsequent focus groups helped to clarify and strengthen the Framework and its principles. A “Charette” and a Critical Friends Group, both consisting of prominent thought leaders in teacher education reform within and beyond MSIs, were leveraged to garner specific feedback on the Framework and its RoadMap documents.

BranchED’s Framework is unique, in that it does not focus on candidate competencies nor philosophical orientation. Rather, it focuses on six design principles that high-quality educator preparation programs implement to ensure graduates are competent and confident educators able to leverage, not fear or ignore, the differences among their students. Two of these design principles (**Community of Learners** and **Data Empowerment**) provide the foundation for the remaining design principles: **Practice-Based Approach**, **Inclusive Instruction**, **Equitable Experiences**, and **Intersectional Content**.

Each of the design principles was based on contemporary mixed methods research in the fields of teaching and teacher education.^{2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12} Each is defined in terms of the critical shift it calls EPPs to make and is operationalized by a set of indicators that help to guide continuous improvement efforts. The Framework is asset-based, formative, and designed for the purposes of continuous improvement, rather than compliance. It is not a one-size-fits-all model; rather, its’ design principles serve as critical focus areas in which providers can concentrate their improvement efforts.

Design Principles



Quality educator preparation is catalyzed by a broad-based **Community of Learners**. The Educator Preparation Provider (EPP) establishes a community of learners through leadership, shared responsibility for candidate learning, and professional collaboration.



Quality Educator preparation is **Data Empowered**. The EPP has an active culture of inquiry, utilizing an authentic and ongoing cycle of evidence-based improvement that begins with asking thoughtful questions, moves through organizational learning and action, and ends with an evaluation of the effectiveness of actions taken.



Quality educator preparation is grounded in **Intersectional Content**. Before program completion, candidates demonstrate mastery of content related to learners, learning, subject matter, content knowledge for teaching, pedagogical knowledge, assessment, and engagement with families and communities. Such knowledge is dynamic, constructed, and overlapping.



Quality educator preparation is experiential and incorporates a **Practice-Based Approach**. The EPP purposefully engages candidates in direct experience of teaching (practice) and focused reflection, in order to increase knowledge, develop skills, clarify values, and develop the capacity to contribute to diverse communities.



Quality educator preparation fosters **Inclusive Instruction**. Inclusive pedagogy minimizes or removes barriers to learning or assessment and supports the success of all learners, while ensuring that academic standards are not diminished. Such pedagogy includes the integration of culturally and linguistically sustaining practices, social and emotional learning, cognitive science, and trauma-informed care.



Quality educator preparation ensures **Equitable Experiences** for all candidates. The EPP provides a multi-layered, holistic system of candidate-specific research-based supports, just-in-time interventions, and enrichment experiences that are informed by data and identification of candidate-specific needs. These academic and social supports are regularly provided and actively monitored to determine whether activities are effective in meeting candidates' needs and enabling their achievement.



Quality educator preparation achieves **Targeted Impact**. The EPP demonstrates the overall impact and value of its preparation program on its candidates and graduates such that they are competent and confident in their ability to bring about positive academic gains for PK-12 students, especially students of color and low-income students.

Introduction to the Brief

■ *Overview of the Brief*

This brief is one in a series in which we revisit each of the design principles to ensure continued relevance to quality educator preparation and provide additional information on each based on a review of the literature. In this brief, we highlight the design principle titled: **Data Empowered**, as defined by BranchED. We believe quality educator preparation is predicated on an active culture of inquiry in which stakeholders and education partners engage in authentic and ongoing cycles of evidence-based improvement that begins with asking thoughtful questions, moves through organizational learning and action, and ends with an evaluation of the effectiveness of actions taken. Data Empowered EPPs have moved from a culture of compliance to a culture of inquiry focused on data informed continuous improvement and shared decision-making with key stakeholders and educational partners. We begin by providing an overview of what comprises data empowerment based on the literature. Next, is an examination of each of the indicators that are integral to this design principle followed by a description of how one EPP embeds the constructs of Data Empowered into its practices. Next, is an examination of each of the indicators that are integral to this design principle followed by a description of how two EPPs embed the constructs of Data Empowered into their practices.

■ *Intended Users*

This brief is intended for EPP leaders and teacher educators, whom we define as individuals who play a role in the preparation of teacher candidates by providing instruction or guidance. Teacher educators may hold roles such as: Teacher Education faculty and Arts and Sciences faculty employed by a university, site coordinators, coaches/clinical instructors, PK-12 school-based teachers (e.g., mentor, coordinating teacher), and PK-12 administrators. PK-12 educators may find this brief applicable to their own practice.

Data Empowered

Data are distinct pieces of information, either quantitative or qualitative, that are used as the basis for reasoning, discussion, or calculation.¹³ Data do not speak for themselves; rather, data must be reviewed systematically (i.e., organized and analyzed) to assign meaning for subsequent action. As noted by Heine Krog Iversen:¹⁴

“Data can't determine goals, objectives, or priorities. Data cannot develop innovative solutions to account for unique situations encountered daily. Data is merely there to empower people with insights to assist them. Success is determined by one's mind (knowledge, experience, creativity, and intellect) and heart (beliefs, values, passion, and instincts) and supported with data.

Empowerment is defined as authority or power given to someone to do something. Data empowerment, therefore, is empowering individuals and the collective to access and engage with their own data to improve their community through an authentic and ongoing cycle of data collection, analysis, action, and reflection, which assists with addressing and dismantling issues of inequity and correcting unsubstantiated assumptions.

Indicators of Data Empowered

Quality preparation has an active culture of inquiry, utilizing authentic and ongoing cycles of evidence-based improvement that begins with asking thoughtful questions, moves through organizational learning and action, and ends with an evaluation of the effectiveness of actions taken. The figure below details the indicators associated with an EPP that is Data Empowered and engages in continuous improvement leading to candidate and graduate success.

Data Quality	The EPP routinely gathers valid and reliable attitudinal, observational, and outcome data on candidate performance, program quality, and EPP operations, as well as on PK-12 school system feedback and graduate performance.
Data Analysis and Interpretation	The EPP created frequent opportunities to engage a broad base of stakeholders in exploring data together and engaging in open, honest, and collaborative dialog to analyze and interpret results, while acknowledging the limitations of data-informed practice.
Evaluation of Instruction	The EPP triangulates multiple sources of data to evaluate and improve instruction both within individual courses and practice-based assignments and across programs and EPP areas of focus.
Formative Assessment	The EPP implements culturally responsive data practices to monitor candidate progress toward mastery of intended competencies and progression through the program in ways that enable both the provider and candidates to reflect upon indicators of progress and to improve over time.
Quality Assurance	The EPP uses data to assess whether programs are achieving desired outcomes (program quality) and to benchmark program performance against comparable programs offered by other institutions.
Innovation and Systemic Change	The EPP uses data to spur and test innovations and to promote systemic change, while being good data stewards in protecting individual privacy and combating the racial and economic politics of data use in education.

■ *Data Quality*

An important first step toward data empowerment is having processes in place to ensure data are trusted, accessible, and usable. A comprehensive listing of data that are likely available within the EPP or at the institutional level serves as a handy resource detailing where, when, and from whom you can obtain the data. This then serves as the foundation for finding, understanding, and ensuring the quality of the data. Data quality means data are complete, unique, valid, timely, consistent, and accurate. This includes not only student data (assessment, observational, student focus groups, etc.), but also programmatic data (coursework, course offerings, course evaluations, etc.).¹⁵ Demonstrating data quality increases the likelihood that data will be viewed as trustworthy. Data quality is the foundation upon which continuous improvement rests.

■ *Quality Assurance*

Quality assurance is the process of identifying and eliminating anomalies in the data in preparation for analysis and interpretation.¹⁶ This is an essential component of data empowered action, as “throughout the lifecycle of data, it is at risk of being distorted by the influence of people and other external factors.”¹⁷ Thus, quality assurance is predicated on an ongoing systematic process to ensure data are sound. Using such processes, a program can measure if it is moving toward its desired outcomes, and if it needs to make changes to achieve them more effectively.¹⁸ Most importantly, these processes show whether changes have an impact.

■ *Data Analysis and Interpretation*

Analysis, interpretation, and collaborative sense-making of data are critical within the data empowerment journey. In moving away from a culture of compliance to one of inquiry, outcomes, trends, and performance data are examined to make meaning of the findings. Research has shown, however, that translating data at the individual level is a challenge due to required skills and knowledge. Professional development on data use can be effective, however, data-driven processes must be included.¹⁹ Utilizing teams to explore data has shown to be a promising practice.^{20, 21} Collaborative inquiry via data teams has been found to be more successful than individual inquiry in “seeking clarification, identifying errors, considering alternative explanations, considering follow-up questions, and the use of background research.”²² In other words, data teams facilitate comprehensive and collective engagement with data leading to program improvement.

Interacting with data collectively, transparently, and honestly, allows all stakeholders to take control of their data, promoting their own and their community’s wellbeing. In educator preparation, faculty and administrators must assume responsibility for using data to promote wellbeing—of the program and of their faculty, students, staff, and stakeholders—and to hold themselves accountable for the outcomes of their actions.

■ *Evaluation of Instruction*

Within the BranchED Framework, the ultimate goal of evaluating instruction is to improve teaching and learning, especially for students of color and low-income students. This is accomplished by using and triangulating multiple data sources and various types of data—quantitative, qualitative, formal, and informal. Evaluation of instruction in high-quality education programs is diverse in nature, ranging from specific course assignments to program areas of focus. However, data alone is insufficient to effectively assess instruction in educator preparation programs. EPPs must evaluate data critically, honestly, and collaboratively, and be willing to modify instruction to improve desired outcomes.²³ Considering gaps in data and ways to



bridge the gaps between what EPPs know and what they need to know is central to answering questions and informing actionable next steps.²⁴ This requires EPPs to collect data beyond what is necessary for compliance reporting and make a shift to a culture of data inquiry that can provide valuable insight into instructional practices that either positively or adversely impact candidate outcomes.

■ *Formative Assessment*

To fully understand formative assessment as it relates to the BranchED Data Empowerment principle, one must first understand how formative assessment has previously been defined. In general, the definition of data empowerment was expanded in 2017 by Formative Assessment for Students and Teachers (FAST) to go beyond an ongoing process of modifying instruction to improve student academic outcomes. The current definition describes formative assessment as a planned, ongoing, and collaborative process between teachers and students that includes teaching and learning.²⁵ Effective formative assessment is comprised of setting clear learning goals, eliciting and using feedback to support students, and engaging in self-assessment to advance student learning. To effectively assess student progression, EPPs utilize culturally responsive data practices that allow teacher educators in higher education and PK-12 settings and teacher candidates to monitor students' growth over time leading to improved academic and affective outcomes.

■ *Innovation and Systemic Change*

In our rapidly changing world, innovation in education is necessary to improve students' academic and affective outcomes, promote critical thinking and social skills, spark creativity, and prepare students for a future that we have yet to imagine, thus the impetus for innovation in teacher preparation. Creativity and adaptability are central to innovation as we engage in an asset-based exploration of bright spots and areas in need of improvement, develop new ways to enact positive outcomes, and continuously monitor progress. Change, therefore, is inherent in innovation.

John Moran and Baird Brightman define change management as “the process of continually renewing an organization's direction, structure, and capabilities to serve the ever-changing needs of external and internal

customers,” which for EPPs include teacher candidates, PK-12 settings, and ultimately PK-12 learners.²⁶ There are several components that facilitate the change process: commitment to change; change leadership; individual readiness for change; and engagement.²⁷ Each of these components are instrumental in ensuring a culture in which systematic, honest appraisals of the status quo are undertaken and become the norm. Applying Kurt Lewin’s change process, which he likened to the stages of a block of ice, clarifies how to go about engaging stakeholders in the change process.²⁸ This includes breaking down the way things are currently done, challenging beliefs, biases, behaviors, values, and assumptions, and setting the stage for a new way of doing things. Providing clear and frequent communication, engaging people in the change process, and empowering action based on what is learned and desired facilitate the likelihood that change will be embraced.

Ultimately, innovation and systemic change go hand in hand in order to ensure a continuous improvement process leading to student success.

What it Looks Like in Practice

CASE STUDY IN THE FIRST PERSON

University of North Carolina Pembroke

Our EPP encompasses degrees within the School of Education and across campus in the College of Arts and Sciences. Programs are housed in a variety of departments. Program coordinators (undergraduate) and program directors (graduate) serve on the Council of Educator Preparation Programs (CEPP) and work together on unit-wide initiatives; however, traditionally they remained isolated in their respective departments. Each program had their own virtual portfolio for tracking candidates throughout the program and uploading evidence of meeting state standards. Although there were commonalities to the portfolios for unit-wide key assessments, data for each program existed separately. Programs submitted an annual report for the EPP, which was used in annual reporting.

Our overarching goal is to create a culture of data empowerment, in which we improve access and understanding, streamline data-collection processes, and encourage communication within programs and team members leading to innovative and systemic change. To this end, we have collaborated with partners to implement several initiatives. For example, we replaced the previous system with the ‘Brave Educator Dashboard,’ which tracks all EPP candidates. The dashboard continues to be fine-tuned to address the specific needs of our EPP and ensure data quality.

Additionally, we have begun re-thinking and improving the ways in which we provide data access to our program faculty. Unit-wide and program specific data is securely available through virtual Data Notebooks in Microsoft OneDrive. Within these notebooks, we provide dispositional and testing data in the form of Excel Pivot Charts to empower our faculty in how they receive, disaggregate, and interpret unit-wide and program specific data. To assist with these initiatives, we have scheduled time in monthly CEPP meetings to provide professional development on data use and highlight and discuss changes to data processes. We have also designed a system to provide feedback for continuous improvement leading to student success. Last, we have time set aside every week to hold open sessions where faculty and staff members can meet with our Data Management Specialist and address questions, concerns, or points of interest.

In the spirit of collaboration and transparency (i.e., data assurance), UNCP developed a “squad” system where working groups are focusing on specific items related to the transformation work. UNCP has dedi-



cated data leads who assist in facilitating data conversations. Explicit conversations led to the restructuring of how we look at data and how the data informs our programs. During the Fall Data Institute, we introduced the new structure of Data Notebooks as well as a template entitled, UNCP EPP Improvement Plan. Individual program faculty reviewed data and completed an in-depth data analysis of licensure exam scores. Utilizing the template provided faculty an opportunity to engage in meaningful collaboration to identify course and program revisions to improve the quality of our programs.

Transparency encourages collaboration and improves communication. Faculty feel empowered to implement ideas for continuous improvement when they have access to relevant, quality data, can engage with data in meaningful ways, understand trends in the data, and have the appropriate mechanisms in place to implement the necessary changes. Our unit wide Data Institute offered an opportunity to apply professional development insight for data analysis and visualization. As a result, faculty engaged in data inquiry by asking questions and requesting further disaggregation from our data vendors and state education agency.

CASE STUDY IN THE FIRST PERSON

West Texas A&M University

West Texas A&M University (WTAMU) is a federally designated Hispanic Serving Institution (HSI) located in the heart of the Texas Panhandle. The long-term goal of our university is to “recruit a student body that reflects the diverse population of the Texas Panhandle.” Our Department of Education, housed in the Terry B. Rogers College of Education and Social Sciences, offers a traditional undergraduate program as well as a graduate, online alternative certification program. We are a member of BranchED’s National Transformation Center and have made great strides in our work toward data empowerment.



In the beginning of our data journey, we were information rich, but data poor. Large amounts of data came through our offices and department, but we did not have a system in place to organize, analyze, or share this data. Raw data was collected, but without proper organization and analysis, it was not useful to our stakeholders in making informed decisions.

We realized that housing data and presenting large quantities of raw data to faculty, staff, and stakeholders did not yield the results we desired. Data needed to be organized and presented to stakeholders in a comprehensible manner. With this in mind, we reduced large chunks of data into smaller segments, which allowed us to guide our stakeholders in an analysis process as the data was presented. Based on these efforts we realized that systemic change in which we moved from a culture of compliance to a culture of inquiry required us to be able to house, analyze, and share actionable data. This required:

- ◆ A quality data management system
- ◆ A manageable process for data organization, presentation, and sharing
- ◆ Collaborative data analysis to drive improvements within the program

Data Quality

To ensure data quality, we routinely gathered and validated attitudinal, observational, and outcome-based measures on candidate performance, program quality, and EPP operations. The following ques-

tions guided our data collection and analysis process, which helped to make certain the data being collected would support our cycle of continuous improvement.

- ◆ What data should be collected?
- ◆ Where are the data needed to accomplish the goal housed?
- ◆ How can these data be used to support faculty in planning instruction?
- ◆ When and how should these data be shared so that it is actionable?

Data Analysis and Sharing

We found that the best way to analyze and share the data among stakeholders was to condense the data into one-page summaries and use charts and graphs to illustrate information. We then engaged faculty and additional stakeholders in Data Boot Camps in which we convened stakeholders, presented bite-sized chunks of data, and then guided them through the analysis process using the following guiding questions:

- ◆ What did you learn from the data?
- ◆ What areas of strength does the data show? How did you know this?
- ◆ What are areas of improvement does the data show? How did you know this?
- ◆ What next steps or suggestions would you make after reviewing the data?
- ◆ What other data would you like to have or need to conduct further analysis?

Cycle of Continuous Improvement

The collection, organization, analysis, and sharing of data has facilitated our shift to a culture of inquiry focused on collaborative continuous improvement. We have engaged faculty and other stakeholders as a community of learners to support data-based decision making through systematic feedback opportunities, internal quality checks, and monitoring and adjusting our data processes. Our bright spots have far outweighed any challenge we have encountered. It is important to remember to begin small but think big!

Conclusion

This brief described the design principle of *Data Empowered*. It underscored and expanded on each of the original six indicators associated with this principle: *Data Quality*, *Quality Assurance*, *Data Analysis and Interpretation*, *Evaluation of Instruction*, *Formative Assessment*, and *Innovation and Systemic Change*. Although listed distinctly, all these indicators are inextricably intertwined and therefore, directly impact each other. Data quality and data assurance are essential in order to engage stakeholders in analysis, interpretation, and subsequent action leading to program improvement. Likewise, evaluation of instruction provides teacher educators an opportunity to critically reflect on their instructional practice and how students experience those practices. Formative assessments allow teacher educators to evaluate student performance in real time and make just-in-time changes to enhance the learning process. Finally, innovation and systemic change, informed by data, is the mechanism by which EPPs continue to evolve and produce high-quality, equity focused graduates.

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