



DEANS FOR IMPACT

Reflections on Our Improvement Journey

Believe and Prepare Impact Collaborative

May Convening

To facilitate cross-institutional learning at our May convening, we will be asking teams to identify and share specific successes and challenges in their work this year. To prepare for those conversations, please schedule two hours to meet with your team to answer the following questions by May 10th. To the extent that others have been involved in implementing your plan, it may make sense to include them in all or part of the meeting, or find a way to solicit input from them.

Part I - Sharing our successes

At the May convening, you will have an opportunity to share a specific practice you have piloted this year with candidates to help increase their readiness to teach ELA and/or math. The goal in sharing these successes is to help identify what made it successful and share that learning with other programs in the Collaborative. To prepare for those conversations, with your team discuss and record answers to the following questions.

Write a brief description of a practice you have implemented this year related to your area of focus that has made a difference for candidate readiness to teach ELA and/or math. This might be a specific lesson, module, assessment, field experience, structure or process you have used with candidates. Describe the specifics of the success (what did it look like, when did it occur, who was involved), including how this was different from what has been done in the past.

Prior to the spring 2019 semester, one of the elementary math methods instructors worked to edit the Domain 5 content portion of the Field Experience Evaluation (FEE) form to include items specific to mathematics and based upon the Louisiana Teacher Competencies. Seven elements were added to the FEE in order to reduce the deficiency in data collection pertaining to mathematics content, particularly math verbiage and teaching strategies. In the spring 2019 semester, two instructors implemented the FEE with this revised Domain 5 in both *EDUC 334: Elementary Math Methods I* and *EDUC 335: Elementary Math Methods II*. Ratings for each element were based on a 4-point rating system (*Highly Effective, Effective: Proficient, Effective: Emerging, Ineffective*).

Prior to our deans for impact collaboration, candidates enrolled in two elementary math content courses taught in the mathematics department. There was a lack of communication between the two departments on the needs of the candidates as they were progressing through the program and the courses were not sequenced. Through deans for impact, a course sequence has been created for students to build upon their knowledge as they progress through the program. By working together, common vocabulary and expectations have been created across the four courses to assist candidates in being successful. In the spring 2019 semester, pre and post tests were administered in *Math 122: Mathematics for Elementary School Teachers*. One of the math content instructors and one of the math methodology instructors took the Elementary Math Praxis exam to better understand the presentation of and types of questions on the exam. Based on information gathered, a textbook was chosen for Math 122 that covered more pertinent topics with more resources for candidate learning.

What evidence have you looked at to help you determine that this was a “success”? What did the evidence tell you?

In the spring 2019 semester, candidates in *EDUC 334: Elementary Math Methods I* were evaluated using the FEE including the revised Domain 5 section. The domain is typically scored on a 4-point rating system, however, because this course is offered early in the program before candidates have had the opportunity to hone their skills, the typical ratings in this course are from 1-3 with a score of 4 being given only for exemplary work.

Scores for EDUC 334 were reviewed and the following results were determined. *Real World Application of Mathematics* had the lowest overall mean of 2.44 with a range from 2-3. *Grasp of Mathematical Concepts and Procedures* had the highest overall mean score of 2.92 with a range from 2-3. The scores across the seven domains ranged from 2-4. The data from these domain scores will assist the faculty in pinpointing areas of strengths and areas for improvement for the upcoming semester.

In the spring 2019 semester, candidates in *EDUC 335: Elementary Math Methods II* were also evaluated using the FEE including the revised Domain 5 section on the entire 4 point rating scale. *Precise descriptions of algorithms* had the lowest overall mean of 2.38 with a range from 2-3. *Real World Application of Mathematics* had the highest overall mean of 3.43 with a range from 3-4.

This is the first semester of collected data on both courses using the revision of the Domain 5 portion of the FEE. From this data, it seems as though there was significant improvement from *Math Methods I* to *Math Methods II* in the area of *Real World Application of Mathematics*. However, overall mean scores in *Precise Descriptions of Algorithms* and *Grasp of Mathematical Concepts and Procedures* decreased from *Math Methods I* to *Math Methods II*. The following table indicates the number of candidates falling below the benchmark (3) in both Math Methods I and II on each of the seven Domain 5 elements.

Percentage of Candidate Scoring Below Benchmark		
	Math Methods I n=25	Math Methods II n=21
5.A.1: Use of Explicit Mathematical Language	16%	0%
5.A.2: Precise Descriptions of Algorithms	16%	62%
5.A.3: Grasp of Mathematical Concepts and Procedures	8%	38%
5.A.4: Execution of Mathematical Procedures	24%	43%
5.A.5: Modeling of Mathematical Thinking	44%	0%
5.A.6: Real-World Application of Mathematics	56%	0%
5.A.7: Portrayal of Mathematics	32%	0%

As this was the first semester that this information was collected in both courses and the data collected was on different candidates, we are hesitant to draw any major conclusions from the data. We did note the increase in the number of candidates scoring below benchmark increased on the elements of *Grasp of Mathematical Concepts and Procedures* and *Execution of Mathematical Procedures*. Data collected in the following semesters will be

able to compare the same candidates as they progress from one course to the next. This should give more comparable results to make data driven decisions.

In *Math 122: Mathematics for Elementary School Teachers*, *EDUC 334: Math Methods I*, and *EDUC 335: Math Methods II* candidates were given pre and post tests dealing with elementary math content. The data collected is presented below.

		Pre Test Mean Scores n=68 Possible 100%	Post Test Mean Scores n=46 Possible 100%
Math 122	Overall Average	33.6%	57%
	Category: Numbers	39%	58%
	Ratios	39%	43%
	Numbers	41%	36%
	Reasoning	36%	39%
	Category: Algebra	29%	55%
	Exponents	30%	38%
	Equations	25%	39%
	Functions	31%	37%
		Pre Test Mean Scores n=25 Possible 100%	Post Test Mean Scores n=25 Possible 100%
EDUC 334	Overall Average	69%	80%
	Operations and Algebraic Thinking	67%	71%
	Measurement and Data	79%	84%
	Numbers and Operations in Base Ten	88%	90%
	Numbers and Operations-Fractions	74%	79%

	Geometry	48%	75%
		Pre Test Mean Scores n=21 Possible 100%	Post Test Mean Scores n=21 Possible 100%
EDUC 335	Overall Average	74%	84%
	Addition and Subtraction	100%	100%
	Multiplication and Division	78%	90%
	Algebra	62%	76%
	Fractions	72%	84%
	Geometry	59%	72%

In general, there was improvement from all pre to post tests administered. In Math 122, one of the instructors did not administer the post test resulting in the different n values. One of the math instructors commented that the pre test was administered as a “separate” evaluation not for a grade, but the post test items were embedded into the departmental created final exam for the course. The instructor posed the question as to whether or not the the separate pre-test that did not count for a grade made a difference in the effort placed in completing the problems on the pre test. Overall, mean scores improved, but the overall mean score on the post test of 57% is still concerning.

In EDUC 334, candidates showed improvement in all categories with the most obvious improvement in Geometry with a growth from 48% to 75%.

In EDUC 335, candidates again improved in all categories. In 4 out of 5 of the categories, there was a 12-14% growth from pre to post tests.

These strengths and weaknesses will guide the instruction implemented in the fall 2019 semester. In the past, there was no specific math data to guide teaching practices. Now there is something tangible to use to drive instruction in the upcoming semesters.

What materials or artifacts might you share with others to help illustrate this practice? These could include copies of assessments, completed assignments, lesson plans or syllabi, etc. *Please list them here and upload them to your team’s Google Drive folder; we will compile the resources and share them with others in the Collaborative.*

We will share the Domain 5 portion of the Field Experience Evaluation form that we used to collect data specific to the mathematics content area for elementary education programs.

Part II - Exploring opportunities for improvement

At the May convening, you will have an opportunity to share and get feedback on a challenge you are facing as you continue to implement your action plans to better prepare candidates to teach ELA and/or math. The goal in sharing these challenges is to provide you some new ideas for tackling these problems. To prepare for those conversations, with your team discuss and record answers to the following questions.

As you consider how to implement and extend your action plans next year to continue to improve how candidates are prepared to teach ELA and/or math, what is one problem or challenge you are facing? *You may want to refer back to Our Improvement Journey or your logic model.*

- Describe the problem or challenge as simply as you can in about 3-5 sentences. End the description with a question that you could share with other teams in order to invite them to consult on that problem with you. Some teams find the stem, “How do we....?” or “How can we...” a helpful way to begin that question.
- Focus on a problem that is within your control, rather than external forces that affect your work (e.g., time, resources, accountability demands, etc.).
- Focus on a problem that is directly tied to improving candidates’ content knowledge, specialized content knowledge, or pedagogical content knowledge.

We chose elementary mathematics as our area of investigation due to the low VAM scores that our completers received. One challenge we face is that we will not see these changes evident in our scores for at least 3-4 years. In the meantime, how can we know that we are making a difference that is transferable into the classroom?

We are working on norming the FEE instrument and will continue to work on norming domain 5. We are also continuously working to improve inter rater reliability. If we can establish a clear understanding and consistent evaluation system, our candidates will benefit when they are out in the work force and are evaluated with similar criteria.

In addition, we are seeing that a number of candidates do not have freedom to teach using best practices due to curriculum mandates in their schools. It is unclear as to how much this effects the scores of the completers in that they are unable to move from the scripted curriculum to implement best practices that they have learned in their program.

Another challenge, and probably the one that we could have the most control over, is the disconnect between elementary math content courses and elementary math methodology courses. The content courses are taught by instructors in another department and under a different college. The courses do not always have the same instructor and the instructor may not be familiar with elementary education pedagogical expectations. Although deans for impact has helped us to begin the conversation and create a plan, the follow through for the scheduling of the course and instructors is really in the hands of the math department. How can we emphasize the importance of having a set instructor for the content courses that understands the goals for our elementary candidates?

How would solving this challenge be beneficial for candidate learning?

By coordinating the content and methods courses, candidates would have a mathematical baseline knowledge needed for pedagogical content to build upon. The four required

courses would provide sequential learning for the candidates using standard vocabulary and expectations.

Once several semesters of data are collected, trends and patterns in areas of improvement can be identified. This can guide the topics emphasized in the coursework and the supplemental resources provided to the candidates. By establishing a deeper understanding of mathematical concepts, speaking a common mathematical language, and implementing successful pedagogical practices, it is expected that candidates will have successful impacts on learning in the field.

Describe in more detail some of the factors contributing to the challenge. For others to help you brainstorm around your challenge, what other contextual information might they need to know (e.g., organizational structure and decision-making authority within your program, faculty investment and expertise, typical candidate background, trajectory of learning experiences in the program, historical relationship with district partners, etc.)?

The current organizational structure has the math content courses for elementary majors taught through the math department. Courses are historically taught by “available” faculty and not necessarily a person with elementary experience or understanding of current teaching practices.

Current background knowledge of candidates related to how they were taught mathematics greatly differs from how mathematics is currently being taught in the elementary classroom. So, candidates need a deep understanding of the terminology, calculations, processes, and methods of instruction to be valuable and successful math teachers in the elementary school setting.

In addition, although we have good established relationships with district partners, districts are not necessarily teaching the mandated curriculums with 100% fidelity.

What, if anything, have you already tried to make progress in this area? What ideas do you have about how you might tackle this?

We included a representative from the math department who has elementary education experience and has taught the math content courses for elementary candidates on our team for deans for impact. We have noted that there is a need for a designated faculty member to teach these courses so that there can be consistency and we are brainstorming the best way to offer the courses with a designated faculty member.

In order to better sequence the courses, the instructor in the elementary math content course is using current methodology in the classroom and has changed the text to one that offers online tutorials and additional resources.

Methodology and content instructors have worked with each other to establish a continuum of practice. Communication about strengths and areas of improvement are critical to the success of candidates in these courses and success of the candidates when entering the workforce. This work must continue and time must be carved out among the instructors of methods and content courses to discuss data, revise coursework, and develop practices for learning.

Part III - Reflecting on the Improvement Cycle

At the May convening, we will spend time discussing what we have learned as a Collaborative about engaging in program improvement using the improvement cycle. We will be compiling those learnings for you to use in the future. To prepare for that conversation, with your team discuss and record answers to the following questions.

In reflecting on your Improvement Journey so far, what have you learned about leading program improvement through a continuous improvement cycle?

Making strategic improvements is time consuming. It was very beneficial to have the deadlines established by Deans for Impact to keep us on track. The convenings also forced us to carve out time to review, evaluate, discuss, and progress with our work. The process has been very insightful in that we are now thinking about progress in this area in a more common and streamlined way.

Domain 5 has helped to establish a common guide for teaching the methodology courses as the instructors are ensuring that they are modeling during their own teaching the various points that candidates are graded on within Domain 5 of the FEE.

By working through this process, we have been able to create a sequence and flow between the two methods courses and have made substantial adjustment to the math elementary content courses based on the needs of the candidates.

If you were going to engage in improvement work using an improvement cycle next year, what would you do differently? What would have allowed you to move your work forward faster this year?

We believe that this process worked for us. We have been able to create, implement, evaluate, and reflect on the addition of domain 5. We have changed textbooks for the elementary math content courses. We are developing good practices of data-driven instruction.

What advice would you have for other programs interested in using this process to guide their improvement work?

Dedicate yourself to the process and to improvement.

Part IV - Revisiting the Data Diagnostic

In September, we asked your team to self-assess your program on the [Deans for Impact Data Diagnostic](#), to help you reflect on the quality of data use practices that support continuous improvement. We also asked you to brainstorm ways your team might continue to improve their data use practices over the year. To identify areas where your practices have improved and where there might still be opportunities for growth, we'd like you to revisit the diagnostic as a team.

Activity instructions

Each team member should have access to the [Deans for Impact Data Diagnostic](#) during this discussion.

1. Starting from the first component, a team member shares the rating the team agreed on previously (see table on next page).
2. Referring to the [Deans for Impact Data Diagnostic](#), team members discuss whether they have seen any changes over the year, and whether they would change the rating. *Note: We expect that sometimes teams rate will themselves lower on the diagnostic than they did initially, due to having a deeper understanding of how the data use practice is actually playing out in their institution.*
3. Record your team's assessment in May 2019 column in the table below.
4. As a team, discuss and record your answers to the following questions.
 - a. What is an area you feel like you have made progress on this year? What specific steps did you take to move forward in this area? How do you plan to sustain these improvements over time? What steps might you need to take?

We made the most improvement in the area of *Developing a Shared Understanding*. As a group, we were analyzed data and discussed results in both content and methodology courses. Over the past year, we have created and implemented a seven element Domain 5 for the Field Experience Evaluation and have reviewed it for feedback and revisions. Methodology faculty have completed joint observations to norm the tool and develop common expectations. Faculty will continue to share data results, discuss candidate progress, adjust instruction based on data collection, and continue to work to improve the skills of our candidates in order that they may have a positive impact on their P-12 candidates.

- b. What are 1-2 areas on the data diagnostic that you want to make progress on in the coming year? What initial action steps might you take to begin to move forward on these areas?

Organizing People to Learn is an area that we struggle with mainly due to a lack of time during the academic year to coordinate schedules with stakeholders and university faculty. We have planned a *Shared Governance Meeting* in June to gather input from stakeholders in the P-12 system. The meetings will span three days, with different groups of stakeholders attending at various times. We intend to make this an annual occurrence to receive feedback on our assessments, share our results, share concerns and accolades, and more forward with data driven changes for improvement.

Data Diagnostic Self-Assessment Results

Domain	Component	September 2018 Self-Assessment (Not Yet Started, Emerging, Developing, Sustaining)	Mid-year Self-Assessment (Not Yet Started, Emerging, Developing, Sustaining)	May 2019 Self-Assessment (Not Yet Started, Emerging, Developing, Sustaining)
Developing shared understanding	Establishing an inquiry orientation towards the practice of data use	Emerging	N/A	Developing
	Common understanding and interpretation of teacher preparation competencies	Emerging	N/A	Developing
	Observations to inform common understanding	Emerging	N/A	Developing
	Structures to ensure common understanding in practice	Emerging	N/A	Developing
Collecting, organizing, and analyzing data	Data collected strategically	Sustaining	N/A	Sustaining
	High-quality data from multiple sources	Developing	N/A	Sustaining
	Dedicated personnel time to collect, organize, and analyze data	Sustaining	N/A	Sustaining
	Data available and accessible to manage programs	Sustaining	N/A	Sustaining
	Data presented effectively	Developing	N/A	Developing
Organizing people to learn	Defined roles and expectations for data use	Developing	N/A	Developing
	Protected time provided to collaboratively review data and work on program improvement	Sustaining	N/A	Sustaining

	Planned and structured collaborative reviews	Emerging	N/A	Developing
	External stakeholders involved	Emerging	N/A	Developing
Using data for program improvement	Monitor overall program performance	Developing	N/A	Developing
	Repeated cycles for continuous improvement	Developing	N/A	Developing