Pitt County Schools

R3 Framework

Facilitating Teacher Case Studies

MEASUREMENT INCORPORATED

August

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Introduction

In the spring of 2017, Pitt County Schools inaugurated the first of several advanced teaching roles called the Facilitating Teacher (FT) that is part of its R3 Framework's Career Pathways Model (CPM). The CPM represents the district's innovative solution to offset the high teacher turnover rate by attracting, empowering, and retaining excellent teachers. It does so by coupling financial incentives with increased opportunities and supports for teachers to become leaders among their peers and exert more influence in their school without leaving the classroom.[1]

The FT position attracts highly-effective teachers with expertise in content, leadership, pedagogy, and/or collaboration as is demonstrated by their positive impact on student achievement. For this leadership position, teachers are compensated at a 15% increase above their base salaries while also maintaining their status as a full-time teacher. FTs participate in a series of advanced training courses to prepare them for their position; course topics include but are not limited to, facilitating teams, leading adults, understanding group dynamics, and interpreting and analyzing data. They also receive ongoing coaching from an assigned district staff person, a.k.a., Career Pathway Specialist.

FTs are trained to lead a small group of teachers (i.e., 2 to 4) who are referred to as Collaborating Teachers (CTs)[2] in a Community of Practice (CoP) to address a schoolwide problem of practice that affects teaching and learning outcomes.[3] Most FTs conduct a school-based CoP; however, a small number of FTs (known as Multi-School Facilitating Teachers or MSFTs) work with CTs from different schools to address a districtwide Problem of Practice (PoP). The CoP meets twice a month to develop and implement a collaborative inquiry project, which involves the use of semi-structured protocols to identify a theory of causation for the problem of practice and a driving question to identify potential strategies and solutions. After implementing the strategies, the FT leads the team through a Cycle of Inquiry to analyze data and refine or expand strategies, as needed. The Community of Practice works on the collaborative inquiry project for three years.

Over the past two years, Pitt County Schools (PCS) has filled 89 FT and 264 CT positions in 32 out of 35 schools. This report showcases the work of two CoPs, one led by Amanda Davis at

[1] The initiative was borne out of research findings showing that financial incentives alone do not result in higher teacher retention and better teaching and learning outcomes.

[2] Collaborating Teachers do not participate in the same professional learning opportunities as the FT, however, these teachers benefit from the mentorship of FTs, who share information, practices, and educational resources that they obtain through professional learning opportunities.

[3] The problems of practice were identified by the school administrator, school improvement team, and/or other leaders from the school using schoolwide data.

Pactolus School and the other led by Anita Koen at South Central High School. Pactolus School is located in the small rural town of Pactolus that is about 11 miles east of the city of Greenville, the latter being the epicenter of the district. It serves 601 students in grades prekindergarten to eight. South Central High school is located in the suburban town of Winterville, which is about 7 miles south of Greenville. It serves 1,675 students in grades 9 through 12. Both schools rank in the bottom 50% of the state of North Carolina for student performance, as indicated by their math and English/reading student proficiency scores.

The case studies describe how the FTs and their groups each came together as a CoP to develop and implement their collaborative inquiry project. Each story describes the teams' experiences in the CoP, the successes of their work, and the impact on their schools. Despite the differences in their constitution and problems of practice, common themes can be gleaned from both case studies that echo similar themes found in two previous case studies.[4] The common themes are summarized below. Following are the two case study reports.

- The FT position provides a niche for educators who have a strong vested interest in serving as leaders but who also want to work directly with students in the classroom. Both Amanda and Anita welcomed and fully embraced the leadership responsibilities of the position. They expressed appreciation for the opportunity to have greater influence in their schools but to also see the solutions through to the end by continuing to teach students. These teachers would have likely left the classroom in pursuit of more leadership opportunities; instead, they continued to exert their influence on students while also collaborating with other teachers to expand their success as a team.

- The structure and format of the Community of Practice provides a mechanism to build trust, respect, and flexibility within the team—all of which were believed to be essential to the success of the collaborative inquiry project, according to CoP members. Specifically, teachers believed that the norms of collaboration, their working agreements, and the inclusion strategies, to name a few, created a space for "safe discussions" that helped to keep misdirected emotions at bay and to level the playing field among teachers with a wide range of teaching experience. Over time the groups developed strong bonds that enabled them to be honest with themselves and with each other, which opened the door to greater possibilities when trying different instructional and classroom management strategies. They also felt more accountable to the team than they would have outside of the CoP and expressed a genuine desire for all group members to be successful.

- The Cycle of Inquiry, which involves data analyses led by the FT, enables the groups to better identify root causes for the problem of practice, which has increased teachers'

  -ability and comfort level in using data for decision making,

[4] See https://successforeverychild.com/ for copy of the Year 1 Annual Report that contains case studies on Kimberly Smith and Harry Claus.

-grounding of decisions in actual data rather than perceptions about student performance, and

-level of confidence in finding alternate solutions.

Indeed, teachers agreed that the process helped to challenge erroneous assumptions that they often made about student performance such as poverty or other general causal factors. What they found instead was that the data clearly showed they had greater control and influence in steering the course of student learning than they had previously assumed. For instance, tweaking an instructional strategy, increasing opportunities for students to practice new concepts, or even providing more consistency in classroom management led to greater student success. As a result, the teachers felt energized and empowered to address other areas outside of the problem of practice or with other students.

- Teaching and student learning are improving under the leadership of the FT. Specifically, teachers agreed that they have expanded their toolbox of effective strategies. Moreover, the groups were more consistent in their use of these strategies both within and across their classrooms, as well as their expectations for all students. The CoP groups created a common vocabulary that students better understood and applied to their learning. All of these changes resulted in an increase in student ownership and of course, better performance on assessments.

Amanda Davis, 3rd Grade ESL Vocabulary, Pactolus School

Background/History

Amanda Davis wanted to be an FT as soon as she first heard about the position. At the time, she was a teacher at Pactolus School; however, the school did not request any FT positions for the 2017-2018 school year. She left Pactolus and taught in another Pitt County school for a year. During that time, a new principal, Taylor Matkins, came to Pactolus School. The school applied for, and was awarded, two FT positions. Amanda reached out to Mr. Matkins, who considered several candidates and then offered her the position of FT if she returned to the school. She said, “As soon as I was made aware of the position, I was interested in becoming an FT. I was excited about the opportunity to work alongside other teachers to implement various strategies and monitor data trends.” Amanda, a former Key Beginning Teacher (BT), had been approached about becoming an Instructional Coach at another school and was considering going into administration eventually. Now that she is an FT, though, she enjoys the mix of classroom teaching and teacher leadership; therefore she would like to see the work through to the finish, which is a three year process.

The CoP is comprised of the third grade team of teachers at Pactolus School. Shay Daniels, Stacie Duke, Jessica Jones and Clarissa Lee, the third grade remediation teacher, joined Amanda

Davis to form a Community of Practice (CoP). There is a wide range of teaching experience among the members, including a 2nd year BT, two teachers with 7 years of experience, one with 14 years and one with over 31 years of experience. Regardless of experience level, there is a high level of mutual respect among the team members, and Amanda said that school staff often forgets that there is a BT in the group. In terms of how the team coalesced, Amanda said, "I was very fortunate to work with a group of educators that understood the process and were eager to try something new all in the hopes of making a positive impact on our students." Stacie put it this way, "For me, it just makes me feel closer as a team."

The team meets twice a month during their planning time, which is a 45-minute block. Amanda describes their work during this time as "on task and productive." While many CoPs meet after school, three of the five teachers have children under the age of two and all have various after school responsibilities. For these reasons, the group decided to meet during their planning time and resolved to schedule additional time for other matters not related to the CoP. Attendance at meetings is generally very good. The group had completed 17 meetings as of May 20th.

Community of Practice

CoP members began their work together by focusing on the third grade ESL population. They stated their PoP as "Our English Language Learner population is underperforming on the Reading EOG." They first brought research articles to the table and reviewed various strategies described therein. They then made a list of all of the ESL students and recorded every piece of data they could find on them (e.g., i-Ready, MClass, ACCESS, DIBELs). Amanda said, "There were no consistent trends, the data was all over the place. Our group was overwhelmed and unsure where to begin with interventions."

I hope that our successes are evident, because our group has worked diligently to research and implement specific strategies that have been proven to increase students' vocabulary knowledge.

–FT Amanda Davis

Eventually the group narrowed the PoP to focus on comprehension learners—ESL students who could read and decode fluently but needed more support with comprehension. They completed a Cycle of Inquiry analyzing their first Reading Benchmark Data, the results of which were similar to the

i-Ready data. A decision was then made by the group to implement researched-based vocabulary strategies to see if this would increase ESL student understanding of language and literature standards using third grade Tier 2 words from PCS' ELA website.

They selected direct/indirect instruction as the overarching strategy. For three weeks, the teachers all taught the same eight Tier 2 words using their own preference for direct/indirect instructional strategies. Per Amanda, "We were implementing different direct/indirect vocabulary strategies through our own individual teaching styles, but the post-test data showed inconsistencies among us teachers."

The teachers then chose three main strategies to consistently teach vocabulary: the Frayer model (see more on the Frayer Model on the following page), the Pyramid game (a version of the 10,000 Pyramid game show where students sit back-to-back and one gives clues to another student who guesses the word), and a collaborative Powerpoint presentation connecting the vocabulary words to pictures to support ESL students' visual learning. Amanda said, "When implementing these specific strategies with fidelity, we noticed a consistent growth in student vocabulary quiz data. We realized the importance of understanding not only the elements of each strategy but HOW to best implement each strategy."

A CoP meeting was observed on April 8, 2019, the 15th meeting of the school year. The group met at the guided reading table in Amanda's classroom. The working agreements and norms of collaboration were posted and Amanda distributed an agenda to all team members. The group began with an inclusion activity. A clearing activity was used to transition from the outside world into the present space and topic. Each person was given a minute to vent and then say, "All clear." Clarissa said, "I think that is a wonderful technique because there have been so many times that we have been in meetings where we start on the topic that we are supposed to be talking about and then go, 'You know what happened today?' This strategy…takes care of that. 'Let's get everything that is consuming our minds out in the open, then we are cleared to focus on what we are supposed to.'"

The group briefly reviewed data collected by the Career Pathway Specialist (CPS) assigned by the Division of Educator Effectiveness and Leadership (DEEL) Office. Specifically, Elizabeth Myers collected data via a Cycle of Inquiry process at a previous meeting describing the group members' use of the norms of collaboration (e.g., pausing, paraphrasing, etc.). At this meeting, the team reviewed their previous goals and decided whether they wanted to keep working on the same goal(s) or pick a new one.

The main goal for the meeting was to identify spiral strategies to use for vocabulary review. The group used the "focusing four" prioritization process to help them determine the strategies to use for the rest of the school year. Spiral review is when subjects (or in this case, vocabulary words) that have been previously taught are revisited later in the school year in order to remind/reinforce what has been learned. Amanda asked the group to take three or four minutes on their own to brainstorm ideas for spiral review on their own. Afterward, she told everyone to report out their ideas in a round-robin fashion, which she wrote on flip chart paper. After all of the ideas were recorded, she removed duplicates and asked group members for clarification on some of the strategies suggested. The group looked at the 18 ideas they had

Spotlight: Using the Frayer Model to teach vocabulary

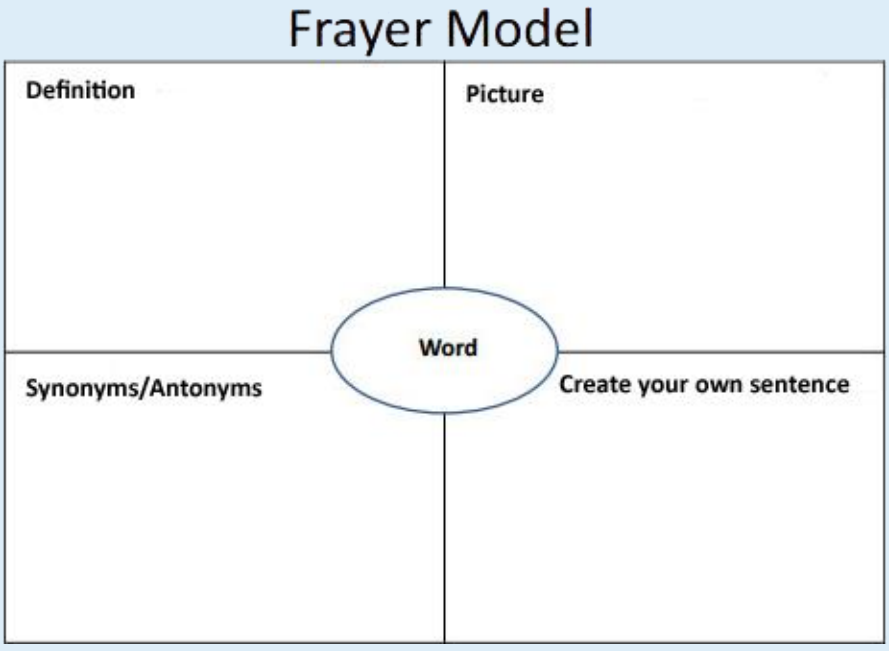
The Frayer Model is a graphic organizer developed by Dorothy Frayer in 1959. According to Teachhub.com, it "helps students select and organize information related to a key concept. Its grid design is divided into four sections: Essential characteristics, nonessential characteristics, examples and non-examples. The purpose for using this type of graphic organizer is to create a visual reference to help students identify unfamiliar concepts and vocabulary."

Amanda recounted, "I was having students complete individual Frayer Models during their word work center. However, after analyzing our vocabulary data, we discussed various vocabulary strategies and discovered Ms. Jones was teaching the vocabulary words using the Frayer Model during whole group instruction."

Jessica replied that she completes four of the more difficult words whole group. "I begin whole group instruction by modeling how to complete the Frayer Model correctly using one of the more difficult words." The students then work on the three remaining words during their independent word work time.

When asked why this might be more effective, Jessica posited, "I think modeling the expectations and supporting students with more abstract words was beneficial in a whole group setting—when I did release them to do it on their own, they knew what to do."

As a result, the whole team now teaches vocabulary in this way. FT Amanda said, "Our (students' vocabulary quiz) scores were all over the place. When we decided that we were going to implement the Frayer Model following Ms. Jones' method, since she was seeing the greatest support, we saw the scores increase by 20 percentage points."



offered and each determined their top six strategies. They looked at which ideas had at least two votes by team members and grouped some of the remaining ideas together. They settled on the following strategies and decided how often they would use them.

1. Entry Definition or Word of the Day (3 times a week)
2. Create a Quiz (1 time a week)
3. Review Practice Paper and Quizzes (each 1 time a week)
4. Games: Vocabulary Alive, Kahoot, Pictionary, Jeopardy, Hollywood Squares (1 time a week)

The group then decided to implement the strategies for four weeks after spring break was over. All team members were asked to put their data into the data sheet for analysis by the next CoP meeting.

The group ran out of time before they could develop their summarizing strategy, which was to craft a summarizing tweet about their spiral review. They decided to use their post-meeting reflections (written by each group member after each meeting) to summarize the meeting.

Early Successes

We all have different teaching styles, but we soon realized how important it is to implement strategies using specific methods our colleagues found to be successful. The goal is student success and through that we succeed as teachers. We learn from each other how to be better educators for our students. ***- CT Shay Daniels***

CoP members believe that their use of data, and more importantly their exchanges with each other, allowed them to expand their instructional repertoire and use strategies more consistently and effectively to teach vocabulary. Amanda said "I was learning more successful strategies through conversation and observations than relying on research-based articles alone." These frank and open conversations strengthened the bond of the team, resulted in greater accountability to one another, and led to better instruction for ESL learners. In terms of the work, Clarissa said, "You have to be willing to not get offended at others' recommendations. We are here as a team…You have to be able to say, 'What I am doing is not cutting it. What are you doing that is providing success for students?' Don't be afraid to share your ideas."

In fact, CoP members reported that students are making real world connections to the vocabulary words—one class came up with a song to remember a word inspired by a popular rap song. A student in another class used a self-taught strategy from the Frayer model technique to help her on a quiz by writing synonyms on top of the words to help her.

Most rewarding is the fact that the targeted students are demonstrating improved academic performance. Their average score on vocabulary quizzes has improved by 20 percentage points from 59% to 79% correct. FT Amanda said "Our ESL students have shown growth since we have implemented these strategies authentically and with fidelity." Shay described the look on her students' faces when she returns their quizzes now, "I can see that students are now ready to

get their quizzes back. You see their faces light up and that makes me feel accomplished because I know that I am helping students feel successful."

In addition to the ESL comprehension learners targeted, other students are benefiting as well. Amanda claimed "Not only our ESL students, but all other students have made so much growth on their vocabulary quizzes since we implemented these strategies. Therefore, I believe these strategies can be applied to all learners across all grade levels." While these other students were not the primary target, their improved performance might be considered a collateral benefit of the new strategies.

Beyond this year's PoP, the group seems to have developed a problem solving muscle that they are eager to apply to other problems of practice in the future. Looking ahead, they felt empowered by this year's success to address achievement among African American male students. Amanda said, "Our African American male population needs a great deal of support, however, we were initially unsure we would be able to tackle this problem while learning about the CoP process and building our group-work foundation. However, now that we feel successful and motivated that our work is beneficial and our goals attainable, we are ready to take-on more areas of need in the future." All team members agreed that this would be a good focus for next year.

In terms of the ultimate goal of R3, this case study echoes themes found in other findings from the evaluation. Involvement in these initiatives is keeping good teachers in the classroom—and at both ends of the career spectrum. Clarissa said, "Even after 31 years, I am still learning new best teaching practices." BT Shay reported, "I have a strong support system. I have colleagues that are BTs; we have totally different experiences. They feel alone; they need help. Meanwhile, I share with my colleagues 'My team did this and we did that.' I am thankful for my strong team." In thinking about her future plans she said, "Do I want to stay in teaching? I could use my master's degree to explore other opportunities. However, working with this team and having the support that I have, I want to stay here as a classroom teacher. My master's degree focus is teaching English as a Second Language so our CoP aligns perfectly with my passions."

Schoolwide Impact

The work of the CoP has been intentionally limited to their specific PoP this year; however, CoP members planned to present their findings to the School Improvement Team (SIT) or the school staff in May.[5] Principal Matkins thought that SIT team would be an eager assortment of staff willing to learn about the strategies and since they are grade level representatives who would pass on the information to others on their grade-level teams throughout the school. The CoP members felt that some other teachers would benefit from concrete examples if they were going to implement these strategies on their own. Regarding how the group's work might influence schoolwide practices, Jessica said, "Teachers need proven-successful strategies specific to our diverse population. When they are introduced to a strategy that works for a

[5] A review of the team's documents in Google Drive indicates that the group made a presentation on May 13, 2019.

peer, and there is evidence to support it, I think they will be more willing to implement these strategies in their own classrooms."

Part of what might pave the way for use of these strategies by the whole staff is the involvement of the ESL teacher, Ginny Valentino. Amanda said that the CoP had consulted Ms. Valentino earlier in the year when they selected the strategies. She gave the group feedback and was very enthusiastic about their ideas. She might be the key to future acceptance and adoption of the strategies schoolwide.

Furthermore, Amanda said that she and the other FT at the school had spoken to the administration about using the Cycle of Inquiry at the beginning of the next school year with the EOG data, advocating that this is a more authentic way of examining the data. "Usually our data is shared with us outright, but through the cycle of inquiry we can 'get out' our known/unknown assumptions and predictions about the data before the data is shared to have a more meaningful analysis." These efforts will likely incrementally increase acceptance and use of the strategies among the whole school staff.

Summary

The Pactolus CoP went to work this year on a focused student population of ESL learners. They applied the Cycle of Inquiry to identify a focused approach to vocabulary instruction which yielded a 20 point gain in student quiz scores. Like other successful CoPs, they used a blend of research-based strategies along with reflection and cross-pollination of what works in their classrooms. They plan to continue to use these strategies in their classrooms and share them with the School Improvement Team in hopes of extending their success to other classrooms in the school. They are internalizing the process of how to work together to address problems. They feel empowered by their successes with this population and are looking towards how to address other student populations in need in the future.

Anita Koen, 9th Grade Math, South Central High School

Background/History

South Central High School (SCHS) is the second largest of six high schools that are part of Pitt County Schools. In recent years, SCHS has experienced low 9th grade End of Course (EOC) Math scores; however, Mr. Janarde Cannon, who became the principal in 2016, had a vision for addressing this schoolwide issue. First, he was part of the principal advisory team that provided input on the job description for the FT position and was aware of the potential impact of having an FT work with other teachers to address the low math performance trend. He also knew that he had a good nucleus of teachers in the upper level math classes that he could pull down to teach Math 1. Finally, he wanted to level the classes into low, medium, and high groups so that more intervention strategies could be applied to students with greater needs.

Entering this story is Anita Koen—a 23-year teaching veteran with a Master's degree and National Board Certification—who along with two other experienced teachers agreed to move down to Math 1 in 2017.[6] One year later, she applied for the Facilitating Teacher (FT) position. "I was interested in becoming the FT for Math 1 because I was already working to help increase our Math 1 scores and I was the mentor for the two new Math 1 teachers coming to South Central," stated Anita. "I wanted to build a PLC that worked. The extra money was a very nice perk. Usually teachers are asked to do extra work without being compensated. It has been very nice to be in a leadership position and be compensated." She was also enticed to the position because it would allow her to continue teaching students.

Anita formed a Community of Practice (CoP) with fellow colleagues[7] Tamra Harris, Rebecca Poole, and Carson Allred to implement a collaborative inquiry project for improving math scores. Over the past two years, the team met weekly during their regularly scheduled PLC time.[8] Outside of their task of addressing low math scores, they developed mutually agreed upon norms, roles, and responsibilities, while following semi-structured protocols during their meetings (see **Box 1** for a list of their working agreements). The group collectively agreed that the CoP process helped them to build a relationship that is marked by mutual respect, support, and trust—all of which took some time to develop. As stated by Rebecca, "We don't have opportunities during other PLCs to develop relationships with [our colleagues]. It is typically set up so that we go in and do our work and leave. With this group, we have a deeper relationship with one another, which is why I like being a CT." Anita added, "When we look at this data, nobody feels targeted. We are looking at *our* data. We spent a lot of time trusting each other."

Box 1. CoP Working Agreement

We will maintain a professional culture by: 1) Ensuring that every member has a voice, 2) Listening to understand, not to respond, 3) Encouraging out of the box ideas, 4) Starting on time and ending on time, 5) Staying focused in meetings, 6) Maintaining unity, 7) Giving our CoP after school priority, we will not schedule any other event during CoP time (3:45 - 4:45), and 8) Encouraging and supporting each other. We are a team!

[6] In 2018 the two other veteran teachers moved to different positions in and out of the school.

[7] The CoP included one other teacher who has since left Pitt County Schools.

[8] On Wednesdays, except for the first week of each month when Beginning Teachers have meetings.

Community of Practice

We all stay after school, offer tutoring usually after 6 pm. We are the first ones here and last ones here. There's a difference between teachers who view teaching as a calling and those who view it as a job. We are invested in our work. – *FT Anita Koen*

In year one, the group spent the bulk of their time identifying root causes for low math scores and developing lesson plans and pacing calendars to plan backward from the test. The group hypothesized that low math scores were a result of students having "difficulty understanding directions on assignments, classroom tests, and End of Course test."[9] According to Tamra, "We realized that the data was low because they missed key pieces from reading. If you give them a straight up math calculation, they can solve it but if you put it in a word problem, no."

The group implemented various strategies and procedures consistently across the grade, which included the use of "Unit Vocabulary Words" and "Four Square Vocabulary Cards" using the Frayer Model,[10] and vocabulary tests. They also began creating annotation norms for each assessment. Along with leveling the classes, they continued implementation of remediation strategies such as test corrections and retesting, which they started prior to their work as a CoP.

In year two, the group shifted their collaborative inquiry project to answer the question: How will the use of the Cycle of Inquiry (CoI) inform our instruction to impact student achievement? Their goal was to see an increase in scores (i.e., DCA and EOC math) by 5% from the previous semester (see **Box 2** for the Cycle of Inquiry). Anita pitched the idea to the team at the start of the school year after she had completed training on the CoI. She admits that she was nervous about how it would work and her ability to lead the group through a cycle but also knew that it would be invaluable to the team's ability to analyze student data and identify appropriate intervention strategies. "I asked Jeff Bell, [a Career Pathway Specialist] to come and sit with me to go through the CoI process before we did it as a group," said Anita. "Perhaps it was just the wording he used or that it was one-on-one, but it finally clicked for me. I understood the mechanics. [After that, I said] let's jump in and see what happens!" The group was unanimously on board with the proposed focus.

[9] As reported by Anita Koen et. al., during a presentation to SCHS' School Improvement Team on January 14, 2019.

[10] The Frayer Model is described in Amanda Davis's case study.

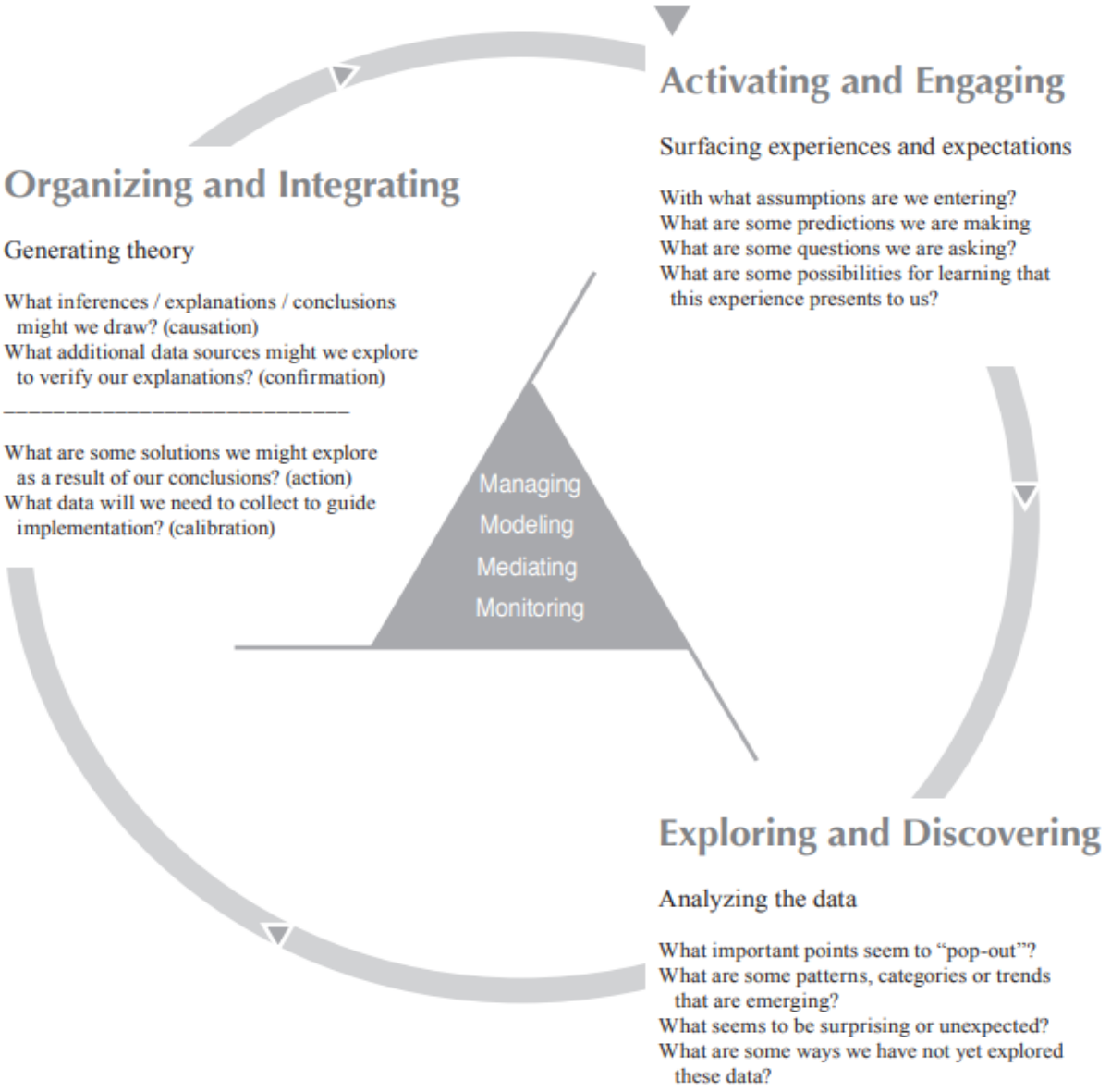
The first CoI took two meetings to complete but the impact was immediate. “The process really opened our eyes. As a teacher, you think you know what students need but the data can tell you specific things that need to be addressed. Our tendency is to think of big picture causal factors, like not enough sleep, etc. We were able to come up with ‘What are we going to do to fix it?’” said Anita. Carson added, “We saw our data last year, but this year we really analyzed it. It helped us to answer deeper questions, like ‘What does it mean and what do we need to change in our instruction?’ It has helped us grow.”

The group tightened up the process for subsequent cycles to make it more efficient and doable in one meeting.[11] To date, they have completed seven CoIs using the District Common Assessment (DCA) data from each semester. The group was observed while conducting their seventh cycle on April 10, 2019, which included a review of DCA scores on correlation and regression. In preparation for the meeting, team members had posted their data on a spreadsheet and made predictions about how they thought students would perform across all classes, which Anita summarized and charted for the meeting.

The meeting began with an inclusion strategy to help the group transition into a discussion about the data. From that point, they engaged in a cycle of reviewing each other’s predictions and making assumptions about student performance on the test. Anita then posted the actual data, and the group compared their predictions to the actual results. The teachers expressed frustration over several items that many students answered incorrectly but were not surprised over poorer performance on the multi-step problems. They discussed causal factors, such as students 1) not reading the questions all the way through; 2) not turning on the diagnostics on their calculators; and 3) assuming that they couldn’t answer a question without the calculator. Finally, the group identified future action steps which included strategies to slow down test taking, spiraling concepts into homework for continued review, and spending more time graphing by hand so that students do not feel the need to have a calculator at all times. The group also pitched out the idea of a more direct focus on building a growth mindset amongst their students.

[11] For example, they agreed to post their predictions and data prior to the meeting, in addition to extending their meeting time to 1 hour and 15 minutes.

Box 2. Collaborative Learning Cycle: Cycle of Inquiry



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Early Successes

[The students] were rushing through the work and not reading the questions. They are too calculator dependent. These are bad habits and we have to break them. I come [from] the middle school so I know how they are taught…Basically, I try to get the students to think about the questions. 'What is the question really asking you? Solve the problem and check your work. Is your answer reasonable?' ***- CT Tamra Harris***

The group unanimously agreed that using the CoI process has been beneficial to their instruction and understanding of students' needs. Specifically, diving into the data using this process has better enabled them to identify specific areas of weakness and actions that they, as teachers, can take to address these weaknesses as compared to making broader assumptions, which they would have done prior to their participation in the CoP. As stated by Carson, "This process helps to inform my instruction because I'm looking at what I need to do differently. It's not about what they are doing wrong, it's about what can we do differently so that they are getting it." Similarly, Tamra said, "It's about making the right instructional match. Yes, we plan and pace but then we adjust and tweak. Some days, I have to take a step back and tell the girls that I need to reteach. They aren't getting it so I need to do more of the previous lesson." Anita added that leveling the classes also helped them to see the patterns of needs more distinctly. "When you see them all struggling with certain math concepts, it made it easier to identify that word problems were an issue. When we had mixed groups, some kids would get it and others wouldn't—it was difficult to see what the data had to say."

The teachers also credit the increased consistency across the grade to their success. This included using the same grading categories and scales, a no cell phone policy, and the same discipline policy. To this point Rebecca said, "Consistency is key. We all work together even though our specific instructional strategies may be different…. When one is doing a lab, so is the other." Likewise, Tamra stated, "We all have the same classroom expectations. It really helps with parents. You'll get a parent who wants to have their child switch classes. I tell them that it's the same test and same homework." Anita feels that some of their annotation work, which is still in the development phase, is building a common vocabulary that helps with students' understanding of concepts. She said, "The kids are using the language. We are building consistency within the classroom, too."

In year one of the CoP, the percentage of correct items across the DCA assessments increased from fall to spring for all math concepts. Year 2 data was not yet available. The team is pleased with the progress thus far. "Just seeing the growth with DCAs [for the students in the low-level class] makes me feel better about the type of growth that they are capable of….They like learning. They tell me that their previous teachers didn't teach them as much as they have learned with me," stated Carson. Students hold each other more accountable, too. "They track their own data," said Tamra. "I have a blog on my website. I ask them, 'What do you think? Make your own predictions.' We are giving them the reigns of accountability to be responsible for themselves."

Schoolwide Impact

The group presented their work to the School Improvement Team and at two faculty meetings. They have received compliments from fellow colleagues and are hopeful that the process and strategies can be implemented in other PLCs. In fact, the English Department began to implement the Cycle of Inquiry as a result of the information that was shared at the presentations. Moreover, the CoP was complimented for creating and implementing a Multi-Tiered System of Support in math with the leveling strategies, use of the CoI, and making instructional matches based on students' need.

Summary

After just two short years, the South Central High School CoP has mastered a process of data analysis using the CoI that has enabled them to pinpoint areas of need and to identify root causes for lower performance. As a result, the team has developed a theory of action that includes ensuring consistency in expectations and norms across the classes, building math vocabulary, remediation, and class leveling. In year three, they will create annotation norms for all tests and continue implementing the strategies that have been successful. Anita, Tamra, Carson and Rebecca look forward to continuing their CoP with the goal of pulling up Math 1 scores and empowering students.

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