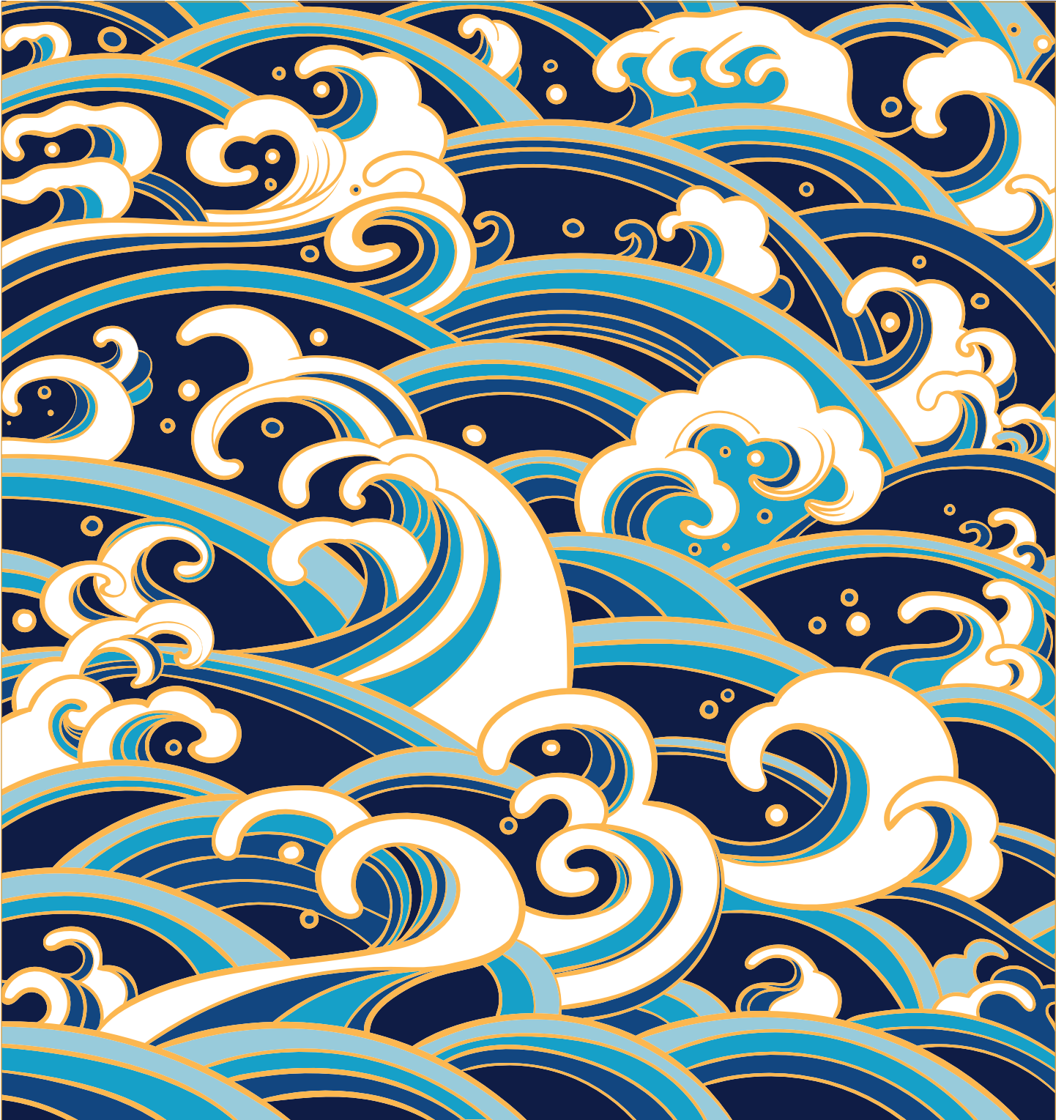


NCSM Journal

of Mathematics Education Leadership

SPRING/SUMMER 2019

VOL. 20, NO. 1



NCSM—Leadership in Mathematics Education

www.mathedleadership.org

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Positive & Productive Coaching: An Interview Protocol and Systematic Approach for Creating Coaching Goals

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Abstract

Mathematics coaches have an immense responsibility to uniquely coach a diverse group of teachers in “areas related to standards, curriculum, assessment, and professional development” (AMTE, 2010, p. 1). Because of the diversity of teacher’s needs and school settings, it is important that a coach establish personalized goals with each teacher. Establishing these goals and making sure they are effective requires a positive and trusting relationship with the teacher based on shared values. This article outlines an interview protocol to guide initial interactions and a systematic approach for identifying a coaching goal. Included is a sample interview, an analysis of the interview questions, and strategies for creating a productive and positive interview. By using this interview protocol, the coach will be able to select purposeful questions, build a positive relationship with the teacher, and obtain the necessary information to help create an effective coaching goal.

Introduction

Mathematics coaches have the prodigious task of working with teachers “in a professional development capacity or to target school-wide improvement in mathematics” (AMTE, 2010, p. 1). Coaches must consider math content, teaching practices, and professional relationships while intentionally planning to support individual teacher needs (Baker & Knapp, 2019). Vislocky (2013) states that for long-term impact, effective professional learning needs to be sustained over time, relevant to the needs of the learning community, focused on deepening content knowledge and pedagogy, and engaging for teachers as learners. Mathematics coaches are often “left to their own devices to figure out their job—where to work, who to work with, what to do, and how to actually increase student learning” (Hull et al., 2009, p. x). It can be challenging for a coach to know where to begin which is why Confer (2006) suggests building good relationships with teachers as a coach’s first priority.

Those relationships are affected by coaching style. Knight (2009) describes two coaching styles; coaching light, which prioritizes building strong relationships, and coaching heavy, which uses high stakes interactions with the teacher and uses data to determine how to support them in planning, instruction, and assessment. Another challenge for coaches is deciding how to balance coaching light and coaching heavy (Knight, 2009). West and Cameron (2013) suggest beginning with, “What are the develop-

mental needs of this teacher?” in order to determine the specific goals and not become distracted with improving other aspects of the teaching and learning. Morse (2009) describes the importance of identifying teacher’s wants and needs in order to create coaching goals.

But while experts agree on what is important in the goal-setting process of coaching, few offer how to get there. We offer an interview protocol that can be used to build positive relationships with teachers that encourages open-ended reflection as a way to discover teachers’ values. The interview protocol incorporates a perfect world scenario and was created to balance coaching light and coaching heavy, while also identifying the developmental needs of the teacher and providing a clear direction for the coach.

Relationships as the Foundation for Goals

While coaching goals can seem nebulous, they all begin with relationships. The National Council of Supervisors of Mathematics (NCSM) lists relationships as one of the four foundational elements of coaching (NCSM, 2019, p. 33). This was echoed by a group of math coaches using a baseball analogy. When asked, “What should a baseball coach do first when coaching a new team?” one coach responded that they should “introduce yourself and build relationships with the team.” Another said, “I think that by seeing what they [the players] can do now, watching them field the ball, you’ll have better information on where to start with them.” Another added, “When you pre-assess and focus on what they do well, it leads you to building that positive relationship because you can highlight what they are already able to do.” In considering a sports team, these math coaches articulated the importance of building relationships and pre-assessing strengths in order to create coaching goals in working with mathematics teachers.

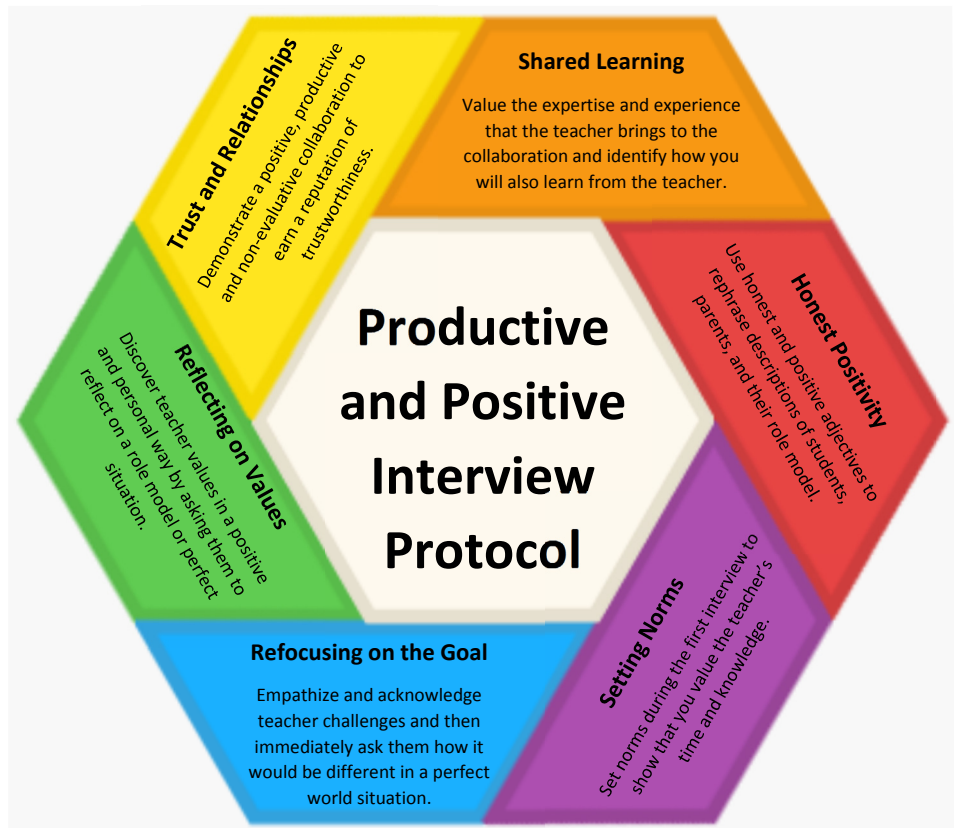
An Interview Protocol to Build Relationships

The interview protocol that we have designed is based on six interrelated themes of productive and positive questioning: trust and relationships, shared learning, honest positivity, setting norms, refocusing to the goal, and reflecting on values.

In addition, it implements a *perfect world scenario*. This strategy is a productive and positive way to discover teachers’ values by asking them to describe perfect classrooms. The strategy does not diminish the obstacles and challenges that teachers face which can be perceived as condescending and undermine trust. Instead, it encourages the teacher to describe best practices from their own experience which establishes common ground and values. This foundation then allows for recognition without excuses and provides a path towards a productive end goal.

We share the transcript of an initial interview with a veteran third grade teacher using this protocol and then analyze it with respect to the six themes.

FIGURE 1. *Themes of the Interview Protocol*



Interview

Coach: It is a pleasure to be with you today. You have a reputation of being a hard-working, passionate, and thoughtful teacher, and I am happy to share in our learning together. Before we begin, I'd like to learn a little about you and your experience as a learner. Who was your greatest teacher?

Teacher: Hmm, well, Mr. Jones. He liked his students and held them to high standards.

Coach: How did he show that he liked his students?

Teacher: He had a lunch club where all students were invited to eat in his room. We could goof around or be tutored, his only rule was that we were kind to each other.

Coach: Wow, what great characteristics, are there other ways that he showed that he liked students?

Teacher: Uh...He was always very respectful and gave us chances, but as long as we were respectful.

Coach: It sounds like he both showed and valued respect.

Teacher: YES! He even memorized our names on the first day, and greeted us at the door every single day.

Coach: You also mentioned that Mr. Jones had high standards, what did he do to show you this?

Teacher: Well, he never accepted late assignments - NEVER! He said that in the real world, people wouldn't give you extensions. But, he always gave a big project at the end of the semester for extra credit. The project was hard, and the people who did it worked for a long time on it.

Coach: He sounds fair, is this something that you value in your classroom?

Teacher: YES! Students should turn in their homework every day, and if they don't, I don't like to get excuses from their parents. I remember how Mr. Jones taught me the importance of a deadline, and everyone in his class always had homework ready. Students didn't whine to him or make excuses.

Coach: What are some strategies that you learned from that great teacher that you use to support students in your class?

Teacher: Definitely learn everyone's name on the first day, and greet them at the door. You have to let them know your rules and expectations, and stick to them.

Coach: I want to know more about what you value in a classroom. In a perfect world, what would the students know and be able to do?

Teacher: They would listen to my instructions and show that they can think and problem solve in small groups. That way, I wouldn't have to lecture the whole time. I want them to work together to solve really hard problems.

Coach: What would be your role as a teacher in this perfect world?

Teacher: To help students with math problems, and not always have to deal with kids who are playing around or goofing off. I'm always having to sit right next to this one group of kids because they get off track right away...they are always arguing with each other the second it is time to work together.

Coach: We do have so many challenges, but what if we didn't, what if it was your perfect world? What would your role be as a teacher?

Teacher: Well, if it was perfect, I would get time to sit with groups for like 3-5 minutes and help them solve their problems. Oh, and students who need my help would know to wait until I was standing, then raise their hands. They would also know what to do while they were waiting for me.

Coach: It sounds like you really value student independence.

Teacher: YES! Exactly.

Coach: I also value student independence. Now...we will plan some lessons next meeting. What standard will we plan?

Teacher: Um...the next unit is Algebra and Patterns.

Coach: Have you started this yet, or will this be the opening lesson?

Teacher: Well, I think...we will practice some patterns next week, but nothing with algebra.

Coach: Ok great to know. I'm curious, teachers like to be acknowledged for incredible teaching in different ways. Some like personal notes, others like announcements during staff meetings, and others prefer documented emails. How do you like to be acknowledged for outstanding lessons? (McLoughlin, 2011)

Teacher: *Well don't make a big deal at a faculty meeting for one. That is just embarrassing. I like when people who observe me leave a note on my desk. You really don't need to make it a big deal.*

Coach: *When we are working together, what are three things that are important to you?*

Teacher: *Um, well definitely being on time and getting stuff done, and also knowing how long things will take to teach. I just want to use the time to actually plan stuff and not just talk.*

Coach: *Great. Here are three things that are important to me: Being on time, working through the math together, and valuing mistakes.*

Coach: *Now that I've learned a bit more about you, I can plan with your values in mind. From now on, we will jump right into planning, just like we jumped right into this interview to value our time together.*

Interview Analysis and Guide

The table on page 7 identifies the six themes of productive and positive questioning, when to use them, and how they were implemented in the interview above.

Reflections on Using the Protocol

This interview protocol has been implemented over 100 times as coursework by math coaches at George Mason University. A key element of it is interweaving the perfect world scenario with the six themes. Here are coaches' reflections on their experiences.

Perfect World Scenario

The perfect world scenario strategy offers a non-threatening, non-evaluative process for teachers to share their values. In this strategy, teachers are prompted to describe a specific component of the world they wish for. Since the situations described are rooted in the teachers' own experiences, the values that emerge from them have more credibility in the goal setting process. Coaches can also apply the perfect world scenario to their own coaching. Pamela connected the perfect world scenario with the idea of growth mindset:

It just reminds me so much of the growth mindset that I am familiar with as a teacher that it's the same perspective as a coach. Just like teachers expect stu-

dents to continually grow and change, the coach needs to realize that teachers are continually going to grow and change. Thinking about the perfect world, I think it is so important as a coach because you're the positive light in the midst of many challenging situations. Aliyah used the perfect world scenario because "it gives the strength to get through those obstacles."

Since it can be difficult for some people to talk about themselves, asking teachers to describe a role model is another way to ask them about their perfect world. Saanvi admitted that "usually I don't want to talk about myself" but when asked about her perfect world scenario, she reflected on the ease of which she could "explain or paint a picture of an experience or a specific situation and I didn't feel super awkward when I was talking about myself." These reflections highlight the benefits of using a perfect world scenario in an interview to focus on the positive and the possible.

Listening and Notetaking

For the procedural element of the interview protocol, it is important to listen and take notes once the teacher is describing their perfect world scenario and values. The process of actively listening and taking notes focuses the coach. In addition, it shows respect and demonstrates genuine interest, which, in turn, develops a positive relationship.

However, this can be challenging. As Bri recalled, "It is a little hard notetaking and [listening] at the same time." While it may be awkward for the interviewer, Saanvi, the interviewee, explains how she appreciated the interviewer pausing and writing down her responses because "she was really listening and she was appreciating the intricacies of the way I liked to assess students...you wouldn't be offended if someone said, 'Oh, that's important to me, I want to write that down'." Bri explained that when she wrote down responses it "really forced me to be an active listener and I sometimes anticipate what people will say and it forces me to just listen truly to their words first and how to find what is valuable to them and that is helpful for me then to have that common ground with them." Liza commented on the importance of notes on feedback based on a teacher's definition of a perfect world. She said, "When I interviewed the teacher, it was interesting to know all those things that they value so we can note that and name that when we see that happening [in the classroom]."

Table 1: Purpose and Highlights of the Interview

TRUST AND RELATIONSHIPS. Demonstrate a positive, productive and non-evaluative collaboration to earn a reputation of trustworthiness.

To Promote Trust Relationships ask:

- “...I’d like to learn a little about you and your experience as a learner. Who was your greatest teacher?”
- “...teachers like to be acknowledged for incredible teaching in different ways. Some like personal notes, others like announcements during staff meetings, and others prefer documented emails. How do you like to be acknowledged for outstanding lessons?”
- “...what are three things that are important to you?... Here are three things that are important to me....”

SHARED LEARNING. Value the expertise and experience that the teacher brings to the collaboration and identify how you will also learn from the teacher.

To Promote Shared Learning include:

- “I am happy to share in our learning together.”
- “We will get to plan some lessons in the future.”
- “Mistakes are valuable. As we work together, we may make mistakes doing the mathematics and that will be a really important part of our work. It’s important students see that we make mistakes too. ”

HONEST POSITIVITY. Use honest and positive adjectives to rephrase descriptions of students, parents, and their role model.

To Promote Honest Positivity include:

- “It is a pleasure to be with you today.”
- “You have such a reputation of being a hard-working and thoughtful teacher,”
- Rephrase the teacher’s words using positive descriptors.

REFLECTING ON VALUES. Discover teacher values in a positive and personal way by asking them to reflect on a role model or perfect situation.

To Reflection on Values ask:

- “What would be your role as a teacher in this perfect world?”
- “What are some strategies [about your role model teacher] that you learned to support students in your class?”
- “I want to know more about what you value in a classroom. In a perfect world, what would the students know and be able to do?”

REFOCUS ON THE GOAL. Empathize and acknowledge teacher challenges and then immediately ask them how it would be different in a perfect world situation.

To Refocus the Discussion ask:

- “We do have so many challenges, but what if we didn’t, what if it was your perfect world? What would your role be as a teacher?”
- “We will get to plan some lessons in the future. What standard will we plan for in our next meeting?”
- “Have you started this yet or will this be the opening lesson?”

SETTING NORMS. Set norms during the first interview to show that you value the teacher’s time and knowledge.

To Establish or Confirm Norms ask:

- “...From now on, we will jump right into planning, just like we jumped right into this interview to value our time together.”
- “If we want kids to make mistakes, what specific steps will we do when we see a mistake?”

Practice

The authors recommend rehearsing and refining your interview through practice and reflection. The math coaches conducted this interview at least three times in order to refine their skills and confidence. Shawna commented,

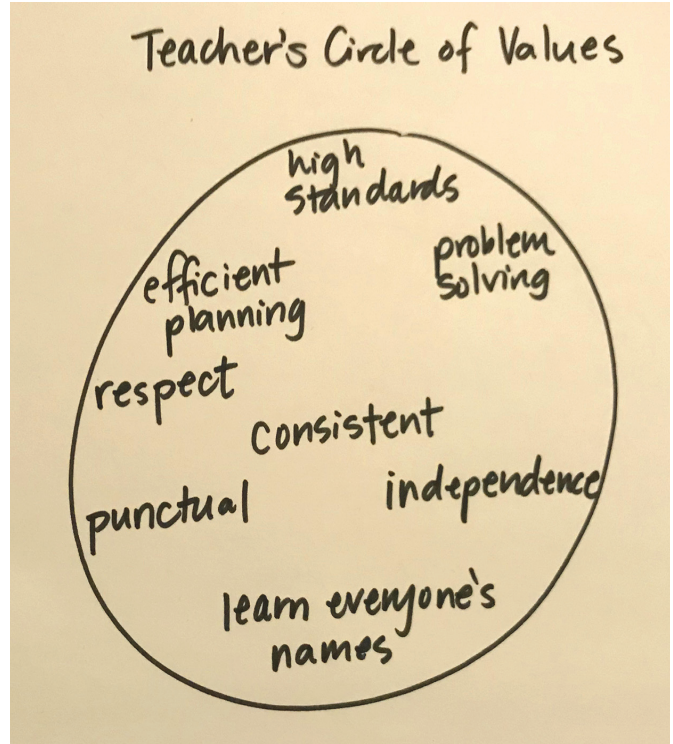
I have done this last semester and I remember feeling really awkward, and this time I felt more comfortable with it. It felt like it flowed better, and I just felt a lot more comfortable. So that reminded me of the quote (by Virgin Thomson) “Try a thing you haven’t done three times. Once, to get over the fear of doing it. Twice, to learn how to do it. And a third time to figure out whether you like it or not.”

West and Cameron (2013) recommend rehearsing coaching conversations specifically to practice word selection, tone, and body language. By rehearsing the interview before it is given to the teacher, the coach can refine the questions while discovering their math identities. When interviewing the teacher, the coach should note the values that are addressed either directly in the perfect world scenario or indirectly in the description of their role model teacher. Then the coach should be ready with follow up questions to gain more detail.

Values To Goals

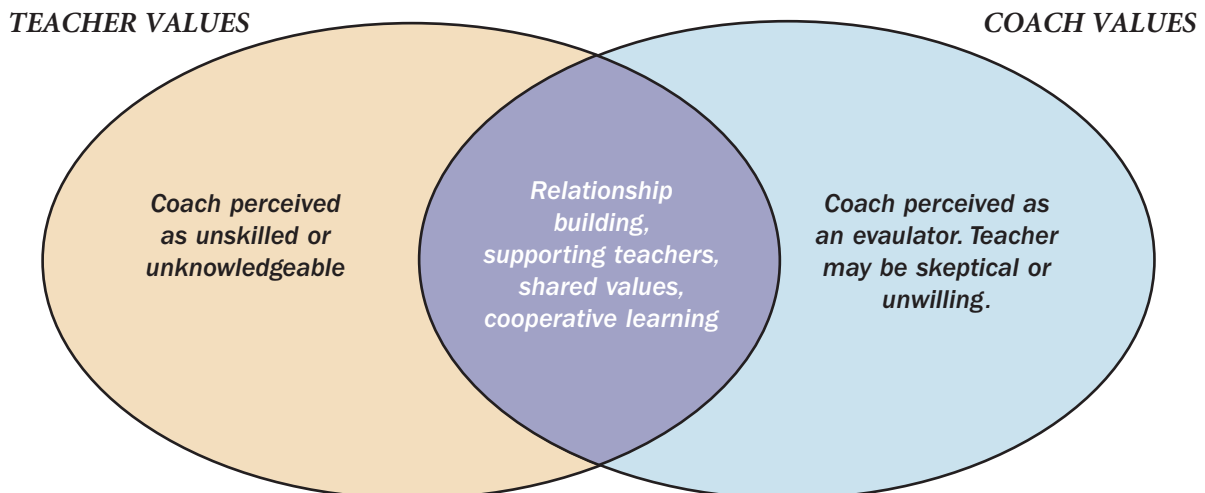
Once the interview protocol has revealed a teacher’s values and developmental needs, the focus can shift to creating effective coaching goals with the teacher. An often-over-

FIGURE 2. Single Circle of Values



looked step when creating these goals is for the coach to know thyself. The safe relationship between coach and teacher must be based on trust and transparency (NCSM, 2019, p. 34), and the best of those relationships are two-way. By creating a comprehensive list of skills, interests, passions, and non-interests, the coach can become aware of their own math identity as they work to help others find theirs. Relative topics might include problem-solving,

FIGURE 3. Venn Diagram of Values



mistakes, productive struggle, homework, working in groups, and parent involvement. Whenever possible, the coach can discover these values by using the perfect world strategy on themselves.

Creating a circle of values is a strategy that can be used to identify and compare the skills, values, and passions of both the teacher and coach. Simply put, if a term describes the person, it is written inside the circle; if not, it is written outside. By creating two circles of values, one for the coach and another for the teacher, coaches can use a Venn diagram to identify potential coaching goals. Shared values would be in the intersection of the circles revealing a good starting point for the creation of goals.

The Venn diagram can also be used to determine areas not to coach until a strong relationship has been established. For example, if math talk is in the coach's circle, but not in

the teacher's circle, the teacher may not be ready to see the purpose/impact and there may be skepticism, hesitation, or unwillingness to participate. Alternatively, if the teacher values something that the coach does not, the coach may appear unknowledgeable or unskilled. Finally, the coach should continuously update the Venn diagram in order to identify topics for further coaching goals.

Summary

In summary, when the coach listens to the teacher in order to discover shared values, they can create coaching goals that are purposeful and focused. The Productive and Positive Interview Protocol introduced here is a way to begin conversations that develop relationships of trust so that teachers feel safe enough to share their values. Once values are expressed and recorded, the coach and teacher can analyze them and refine them to become coaching goals. 🌟

References

- Association of Mathematics Teacher Educators, Association of State Supervisors of Mathematics, National Council of Supervisors of Mathematics, & National Council of Teachers of Mathematics. (2010). *The role of elementary mathematics specialists in the teaching and learning of mathematics*. Retrieved from http://www.amte.net/sites/all/themes/amte/resources/EMSPositionStatement_AMTE.pdf
- Baker, C. & Knapp, M. (2019 - in press). The Decision-making protocol for mathematics coaching: Addressing the complexity of coaching with intentionality and reflection. *Mathematics Teacher Educator*; (7)2 27-43.
- Boaler, Jo. (2014). *The mathematics of hope*. Retrieved October 21, 2017 at <https://www.youcubed.org/teachers/2014/the-mathematics-of-hope/>
- Confer, C. (2006). Being a successful math coach. In Felux, C. & Snowdy, P. (Eds.), *The math coach field guide: Charting your course*. (pp. 1-18) Sausalito, CA: Math Solutions Publications.
- Hull, T., Balka, D., & Miles, R. (2009). *A guide to mathematics coaching: Processes for increasing student achievement*. Thousand Oaks, CA: Corwin.
- Knight, J. (2009). *Coaching: Approaches & Perspectives*. Thousand Oaks, CA: Corwin Press.
- McLoughlin, D. (2011). "High Trust: Accelerating Student Achievement." Lecture presented at High Trust Workshop in George Washington Middle School, August 2011.
- Morse, A. (2009). *Cultivating a math coaching practice*. Thousand Oaks, CA: Corwin
- National Council of Supervisors of Mathematics. (2019). *Coaching in mathematics education*. 1st edition.
- Vislocky, E. (2013). *Five key elements to successful embedded teacher professional development*. Retrieved October 21, 2017, from <https://www.nwea.org/blog/2013/five-key-elements-to-successful-embedded-teacher-professional-development/>
- West, L., & Cameron, A. (2013). *Agents of change: How content coaching transforms teaching & learning*. Portsmouth, NH: Heinemann.
- Wills, T., & Rawding, M. (2018). *Positive and productive coaching mindsets*. Presented at the annual National Council of Supervisors of Mathematics, Washington, DC.