Development Workshop Part III

Facilitators:

- **Bethany Sansing-Helton**
  - **Math Instructor in the School of Arts and Sciences**
- **Tony Cina**
  - **Math Instructor in the School for Academic Advancement**

MADISON AREA TECHNICAL COLLEGE
AUGUST 21, 2017

Workshop Agenda

9:00 – 9:20	Ice breaker and agenda review
9:20 – 10:20	Building groups and facilitating student collaboration
10:20 – 10:30	Break
10:30 – 10:40	Ground Rules for Lesson Study
10:40 – 11:30	**Run through a math contextualized lesson**
11:30 – 11:50	Lesson debrief
11:50 – 12:00	Community Building Activity
12:00 – 2:00	Lunch and Solar Eclipse viewing (maybe at Ale Asylum?)
2:00 – 2:10	Ground Rules for 2nd Lesson Study
2:10 – 3:00	**Run through an Electronics Math 1 (EET) contextualized lesson**
3:00 – 3:20	Lesson debrief
3:20 – 3:30	Compare and contrast facilitation for math lesson to EET lesson
3:30 – 3:40	Next steps discussion (who will be teaching a contextualized lesson in the fall? Details about when and what course…)
3:40 – 4:20	UW folks discuss research and distribute surveys
4:20 – 4:30	Schedule Community of Practice Meetings for the semester and ensure faculty (PT and Curriculum Development) submit time into Workday to get paid.

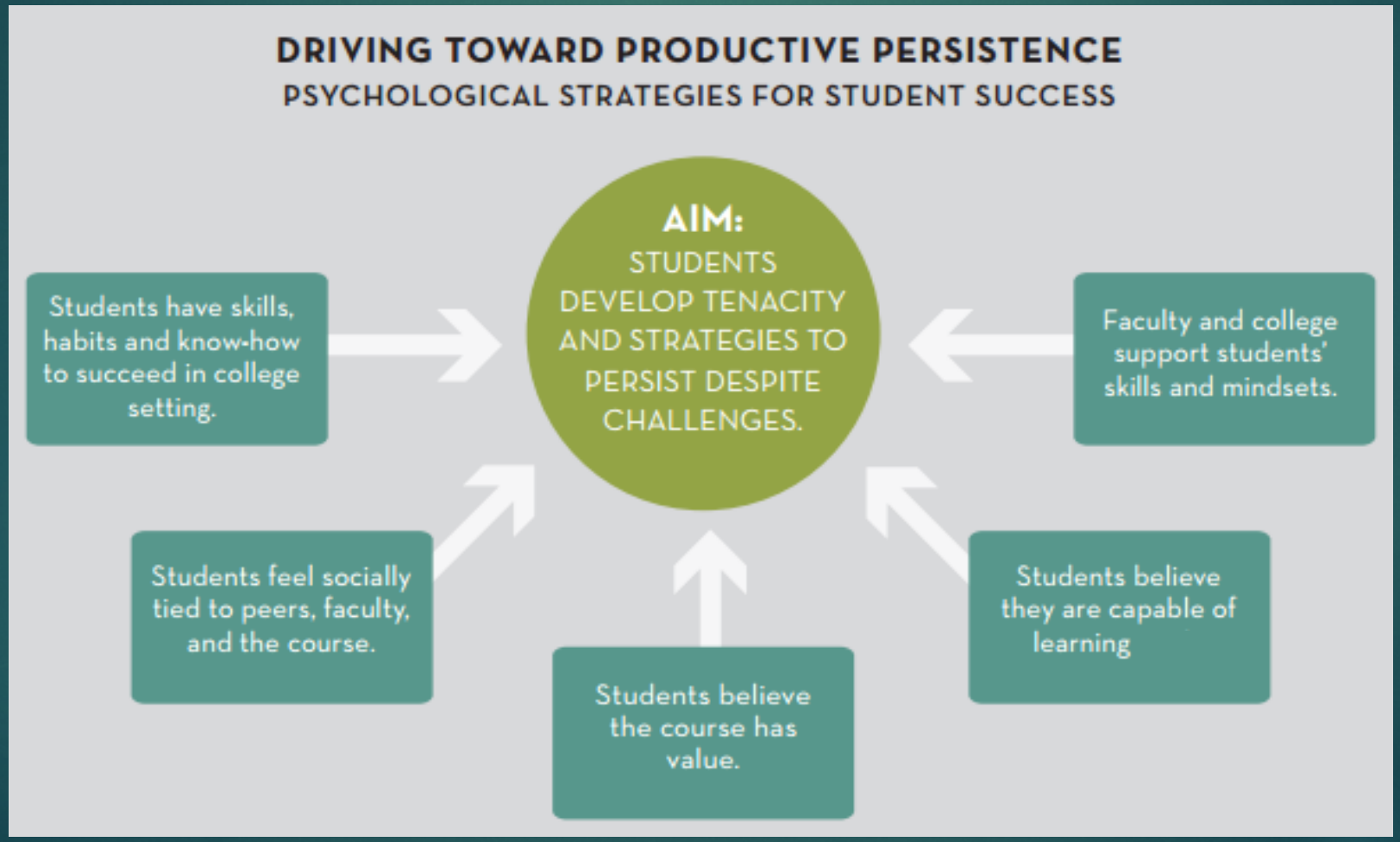
Ice Breaker

- Find someone who:
  - Had the same breakfast as you
  - Has the same hand size
  - Has the same eye color
  - Did something similar to you over the summer
- Lineup according to:
  - Number of siblings
  - Thumb size
  - Number of different states you've visited
  - Number of cups of caffeine you drink per day
  - How tired / alert you feel
  - How many days of your course you plan to contextualize this fall

Goals for this Session

- Learn strategies to promote
  - Student sense of belonging
  - Student engagement in the material and student comfort with 'productive struggle'
  - Growth mindset
- How to create groups that work effectively
- How to help students work productively in groups

Why Bother with Contextualized Curriculum?



Solving a Bank Robbery

- Work together –
  - CAN'T WRITE ANYTHING DOWN
  - CAN'T SHOW YOUR CLUES TO OTHERS

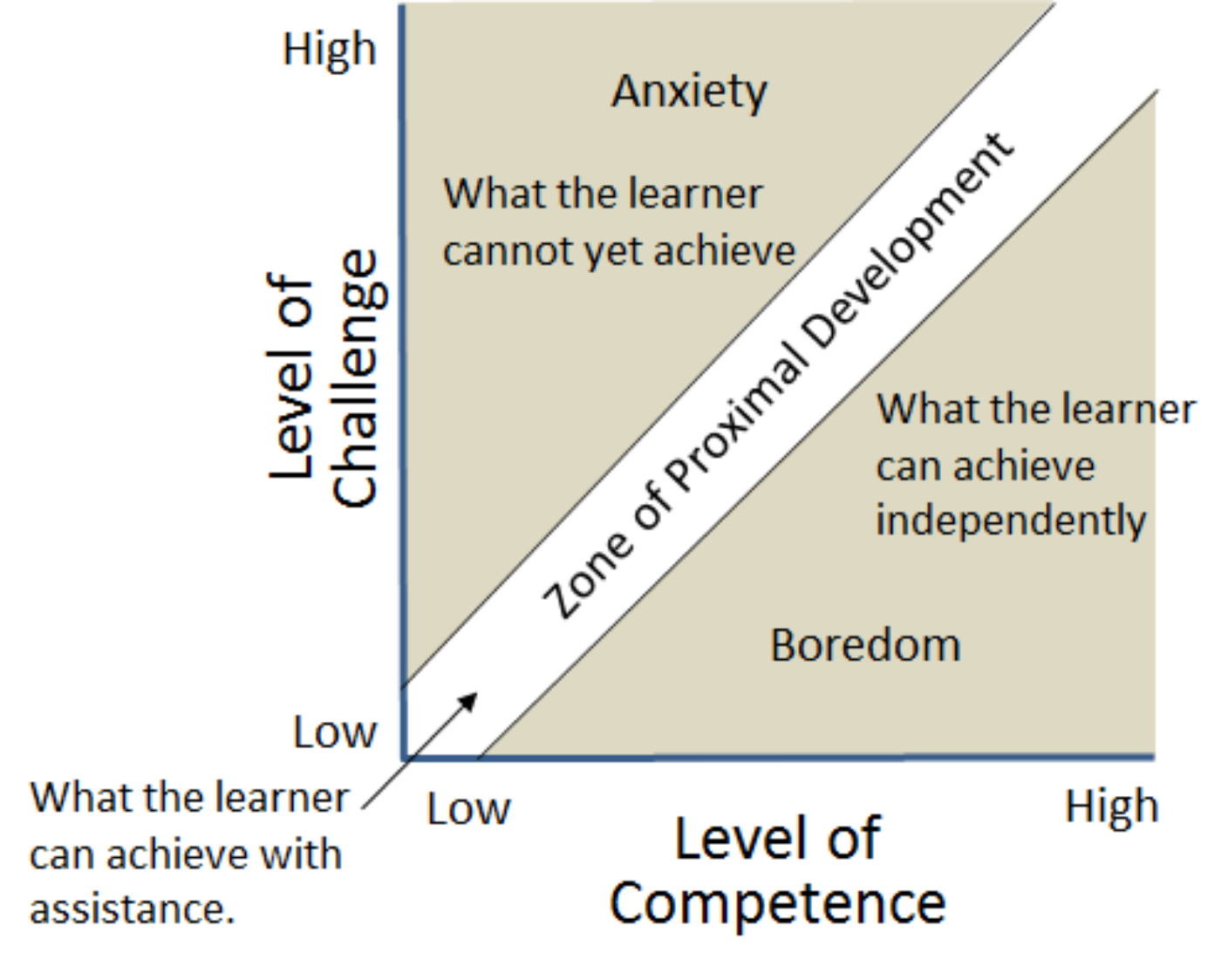
Why start with Groups?

- What do you do already to build community and foster peer collaboration?
- It is worth it to spend time on day 1 building community
  - Encourages working with peers from day 1
  - Immediately students feel like they are part of a community
- Activities done at the start were also done in my classrooms on day 1

Productive Struggle

- Students are engaged in the material and experience 'productive struggle'
  - lesson activity is not just a repeat of something instructor demonstrates
  - Discourage 'procedural thinking' if possible and reasonable
- Encourage conceptual understanding
  - what is really going on in the problem?
  - remind students that there are often MANY different ways to approach and solve a problem/situation
- Encourage asking peers for help and offering help to peers rather than relying on me to tell them how to do things
  - As Dan Myers says… "be less helpful"
- Be on the watch for frustrated students and intervene. ***It is no longer productive if they are frustrated.***

Vygotsky's Zone of Proximal Development



What might your class look like?

- Many professionals such as graphic artists, architects, and engineers work with objects that are enlarged or shrunk. It is usually important that the objects have the same appearance despite the change in size. For example, a business logo on a billboard needs to look the same as a logo on a coffee mug. In this lesson, you will explore the mathematics behind these changes in size. (Math Reasoning Lesson 3.7)

Growth Mindset

- What do you know about the idea of a 'Growth Mindset?'
- Watch from 0 – 4:20 of this video: https://www.youtube.com/watch?v=pN34FNbOKXc
- discuss strategies to encourage growth mindset
  - fixed phrases vs. growth phrases
  - brainstorm growth phrases to use in your own classroom or emails with your own subject area

Creating Effective Groups

- Random Grouping: Counting Off / Passing out Playing Cards
  - Pros: Quick, groups will probably function well
  - Cons: Could end up with unbalanced groups, may take a while for students to get comfortable
- Semi-Random Grouping: Group based on just one or two questions
  - Pros: Still fairly quick, more likely for students to get comfortable quicker
  - Cons: Could still end up with unbalanced groups
- Structured Grouping: Students fill out a survey / assessment on the first day of class and use the results to form initial groupings.
  - Pros: Balanced groups, groups may function well over time
  - Cons: Time intensive. No way to set up these groups on the first day

Helping students work productively in groups

- **Value the groups**
- Have students ask peers in the group for help before they ask you. Reinforce this often!!!
- Force students to move desks and chairs if necessary so they are facing each other
- Encourage groups to share contact info and get in touch with/work with each other outside of class
- Do NOT let students pick their own groups!
- Try a 'group noticing routine'
- When doing group projects… have anonymous group scoring and make it a significant chunk of the grade. Encourage students to be honest!
  - students that are total slackers will not be able to get an A on the project
  - if more than one project… put all slackers in one group or don't allow them to work in a group

Facilitating Contextualized Math Summary

- You should not be working harder than your students in class
- What's the best way to learn to ride a bicycle?
  - A) Watch someone riding a bicycle or
  - B) Get on the bicycle yourself and try to ride it with someone giving you the assistance that you need, when you need it.
- **Be willing to let go of the bike.**
- Be attentive of students emotions (frustrated, happy, disengaged)
- Celebrate successes and remind students that failures are part of the learning process.
  - language caution "I knew you could do it" implies that I know the student better than they know themselves. not good. "I am proud of you." or "I can see that your hard work in this class is really paying off" is better.
  - if a student is discouraged with a failure, show the student how the failure is actually an opportunity to learn. They have learned what doesn't work.
- Allow yourself to make mistakes in front of the students to show that everyone has failures.
- Encourage students to lean on each other for support and community

Dissecting a Lesson

Facilitators:

- **Bethany Sansing-Helton**
  - **Math Instructor in the School of Arts and Sciences**
- **Tony Cina**
  - **Math Instructor in the School for Academic Advancement**

MADISON AREA TECHNICAL COLLEGE
AUGUST 21, 2017

Reminders from the 1st Workshop

- The 'Learning Opportunities'
  - Productive Struggle
  - Explicit Connections
  - Deliberate practice (homework and future lessons)
- The 'Problem Cycle'
  - Launch / Problem Situation (This work has value)
  - Working the Problem (Productive Struggle)
  - Discussion
  - Conclusion (Explicit Connections)

Goals for this Session

- Recognize the different components of the problem cycle
- Identify areas of struggle
- Recognize effective strategies to facilitate learning
- Faculty feel prepared to teach a contextualized lesson

Guidelines for the ‘Lesson Study’

- What is the instructor doing?
- What are the students doing?
- Be on the lookout for
  - Productive (or unproductive) struggle
  - Explicit Connections
  - Supporting student collaboration (or not)
  - Supporting growth mindsets
  - Phases of the Problem Cycle
- Read through the Lesson segment and the Observation Form FIRST

George Alexander Teaching Math Reasoning Lesson 2.3 (Problem Situation 1)

- https://youtu.be/PngCddaShDk

Debrief

- Review the Observation Form as a group
- Share out from each group
- Questions for everyone
  - Anything surprising?
  - Anything you'd fix?
  - Anything you'd copy?
  - Anything you'd never do?

Things to Keep in Mind

- What do we want our students to learn?
- What skills are we trying to cultivate?
- How does contextualization and group work help?
- Pedagogy is student centered engagement in groups
- Lesson design
- Letting students struggle in their groups until they all get it, is NOT the point of this. Must move on and trust that folks will eventually get it. You need to ensure that their is deliberate practice and other opportunities for folks to access the math topics.

Community Building

- For this activity, you are going to select a card from the table. You are looking for a card that captures or expresses for you
  - *How prepared you feel to teach a contextualized math lesson in your course.*
- There is no "right" card to select. Take your card with you and return to your seat.
- We will now take turns sharing our cards.
- *Please share why you were drawn to select the card you did, and how the picture represents for you how prepared you feel to teach a contextualized math lesson in your course.*

Follow up questions (if time)

- *Reflect for a moment on what you shared when telling the group about your card. How did <u>what</u> you chose to share inform for us about who you are?*

- *How might this activity inform how we understand and help our students in the classroom?*

Ann Thompson's Electronics Math 1 Lesson

Facilitators:

- **Bethany Sansing-Helton**
  - **Math Instructor in the School of Arts and Sciences**
- **Tony Cina**
  - **Math Instructor in the School for Academic Advancement**

MADISON AREA TECHNICAL COLLEGE
AUGUST 21, 2017

Goals for this Session

- Experience being a student in a contextualized lesson class
- Provide constructive feedback for Ann
- Determine next steps in the C2L project

Guidelines for the ‘Lesson Study’

- 2 -3 faculty volunteers to be observers (everyone else is a student)
- As a student, imagine you are a specific student from one of your classes and take on their skill level and persona
  - Use the Lesson/Task Feedback form to give Ann suggestions
  - Try not to come out of character while engaging with Ann
- 50 minutes for the lesson
- 20 minutes for the debrief

Debrief

- Review the Observer Feedback
- Share out from each group: how did it feel?
  - Anything surprising?
  - Were you uncomfortable?
    - Was that good or bad for your learning?
  - Anything else?

Math versus Technical Program lesson

- Any major differences in how the lesson was taught?
- Was that because of the content or the instructor or something else?
- What can we learn from each other?
- Consider using the #ObserveMe protocols for feedback
  - http://robertkaplinsky.com/observeme/

Welcome! Please come in and observe me. I'd love feedback on

- How can I improve my engagement with my students to promote a classroom culture where all students feel comfortable answering questions.
- How can I improve my questioning so that all students are encouraged to answer, even if they are unsure.
- How can I improve how I respond to students so they feel comfortable making mistakes and recognize that's part of learning

Bethany Sansing-Helton: bpsansinghelton@madisoncollege.edu

Next Steps

- Take 5 minutes to complete this survey (on your phone, tablet or laptop)
  - **http://tinyurl.com/FallC2Lplan**
- UW Madison C2L Team
  - Network questionnaire
  - Evaluation survey
  - In-person faculty interview recruiting
- Community of Practice Meetings
  - 3 times in the semester
  - Part-time faculty get paid to attend
- CETL will give all attendees FQAS continuing PD credit for attending this workshop for this academic year (see Bethany with questions)

Speaking of Pay…

- If you have developed a lesson to the point where it will be taught this semester, you can get paid for your curriculum development
  - Submit the lesson to Ann, Tony or Bethany
    - Submit a class schedule with the lesson that shows when the lesson will be taught
    - Submit the hours you spent on the development
    - Submit your plans for review and/or revision (ideally with a coach)
  - The lesson and schedule will be posted on the C2L Blackboard site for sharing
    - You will receive a confirmation email that you can submit your hours to Workday.
- Full Time Faculty – paid for curriculum development only
- Part-time faculty – paid for:
  - Work with a coach to develop your lesson
  - Attend PD
  - Attend community of practice meetings
  - Curriculum Development