Finding Joy in Group Work

Knowles
TEACHER INITIATIVE

Goals:

- To introduce you to the three components of Complex Instruction
- Demonstrate these through a task
- Experience joy

Knowles TEACHER INITIATIVE

Transforming Mathematics & Science Education

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The “so-called” Common Classroom

The “so-called” Common Classroom

The not so smart kids.

The class jokesters.

The teacher pleasers.

The popular kids.

The talkative kids.

The quiet kids.

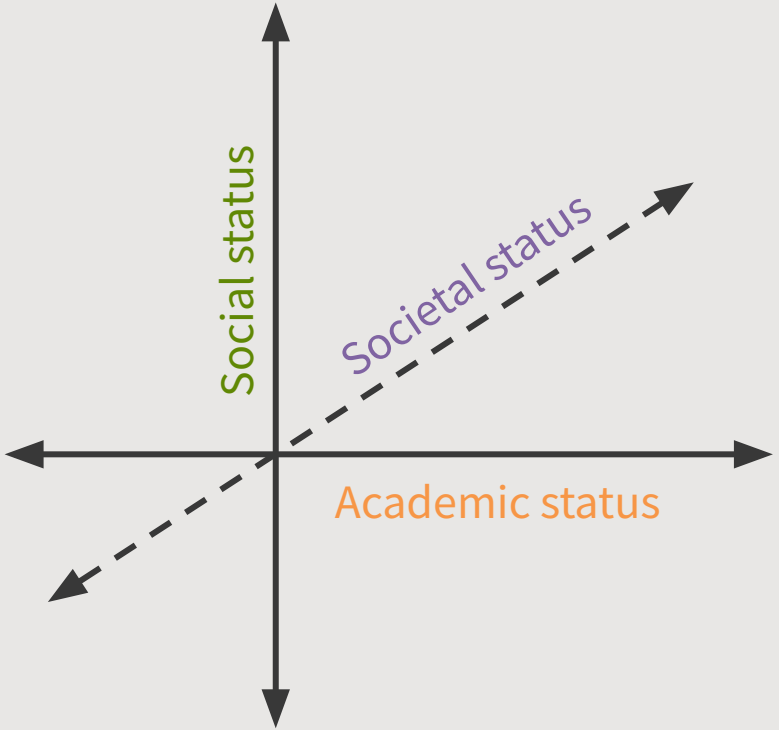
The “smart” kids.

A *different* KIND OF CLASSROOM

- **Understanding and critical thinking**
- **Not just answers**
- Big connected ideas
- Not just bite sized
- Struggle is expected and valued
- Not avoided
- **Learning is public**
- **Not private**

Recognizing Perceived Status (so we can influence it)

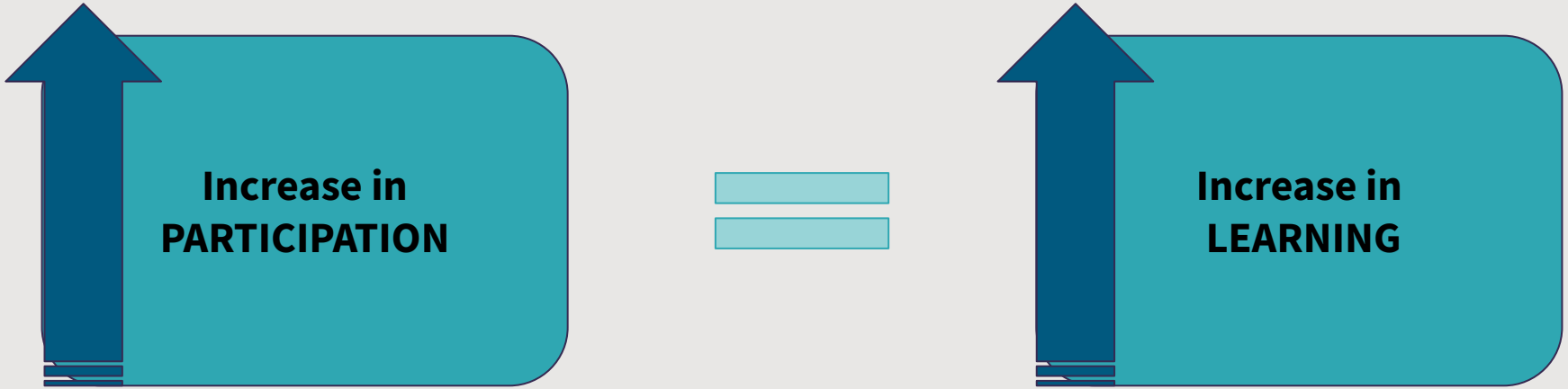
- Personally and/or publicly perceived
- Can be high and low at the same time, but in different categories
- Context-dependent, so it can shift
- We can look at behaviors from the student and others to predict it



What is Complex Instruction?

Complex Instruction (CI) is a pedagogical approach to group work with the goal of equalizing student participation through the use of norms to support equitable participation while students are engaged in cognitively demanding, rigorous tasks.

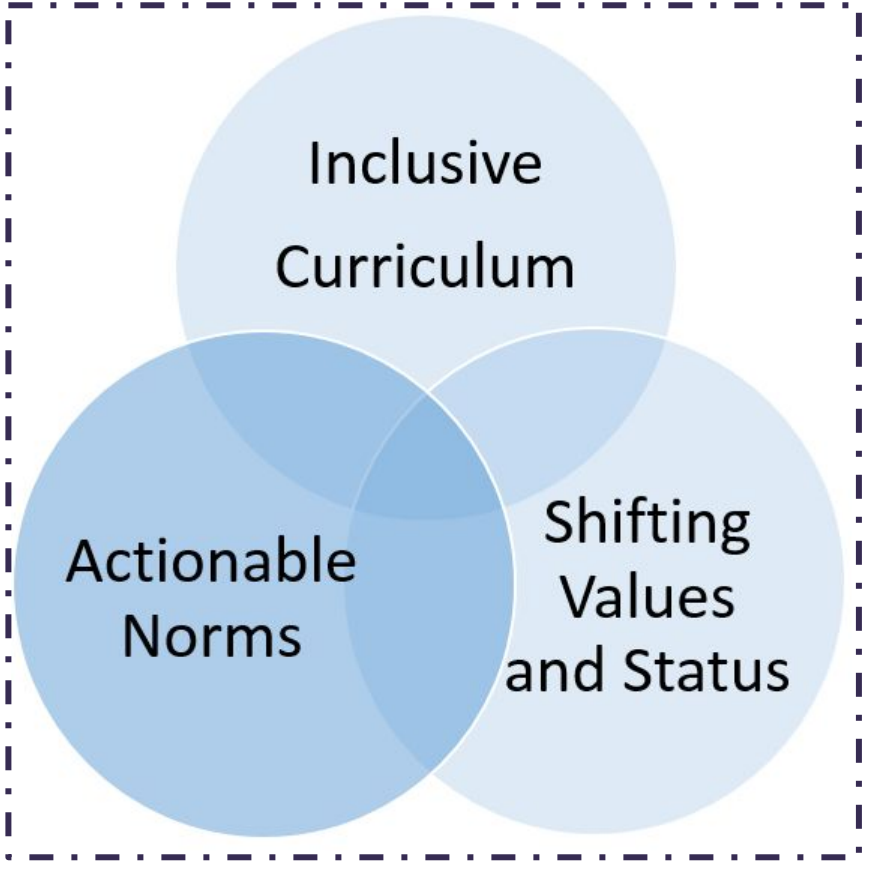
Complex Instruction Findings



Big Ideas from a Complex Instruction Classroom

Purpose:
To increase access

Need:
Accountability
Regular maintenance



So, how do we move forward?

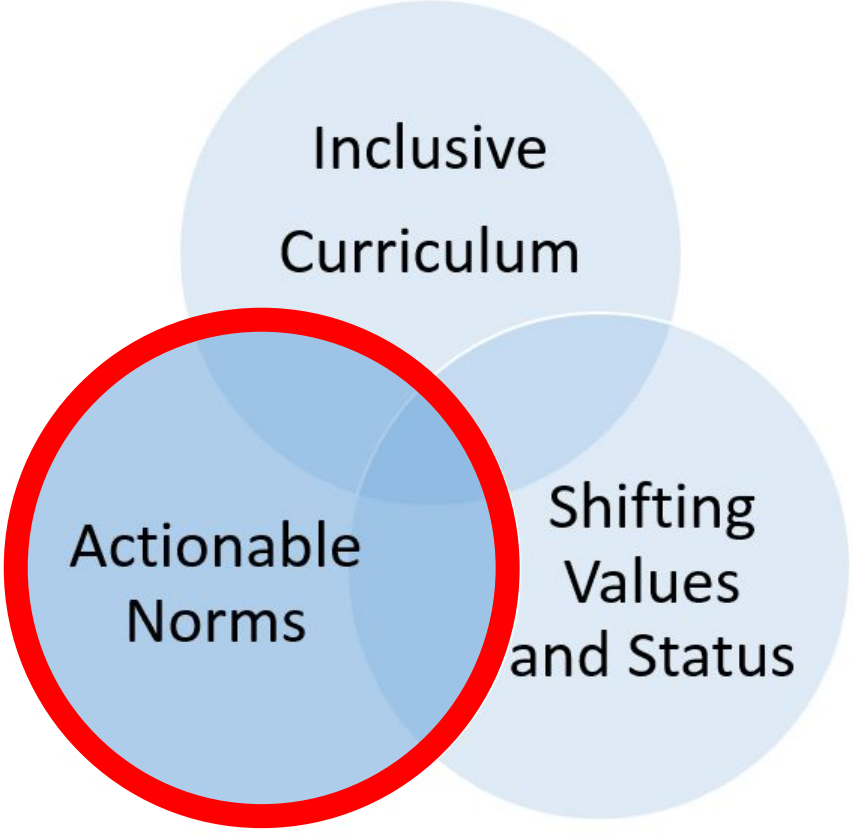
Don't want...

- to be seen as an expert.
- to convince you to change your practice.
- to present CI as an "all or nothing" strategy

Do want...

- to share some structures and strategies that have helped us work towards these goals
- you to use these structures and strategies to have a conversation and think together
- to influence your work, particularly around how you think about and plan for group work

Big Ideas from a Complex Instruction Classroom



Norms vs. Rules

NORMS

- *Developed by the community*
- *Establish how we learn best together*
- *Negotiable, evolve*
- *Upheld*
- *Agreed upon*
- *Build accountability*

RULES

- *Developed by teacher*
- *Keeps things safe and running effectively*
- *Non-negotiable*
- *Followed*
- *Enforced*
- *Prevent chaos*

Norms vs. Rules

NORMS

- *We will include one another*
- *We will treat one another with respect*
- *We will solve problems fairly*
- *We will assume positive intent*

RULES

- *One person speaks at a time*
- *Use indoor voices when in the classroom*
- *Sign out to use the bathroom*

Actionable Norms

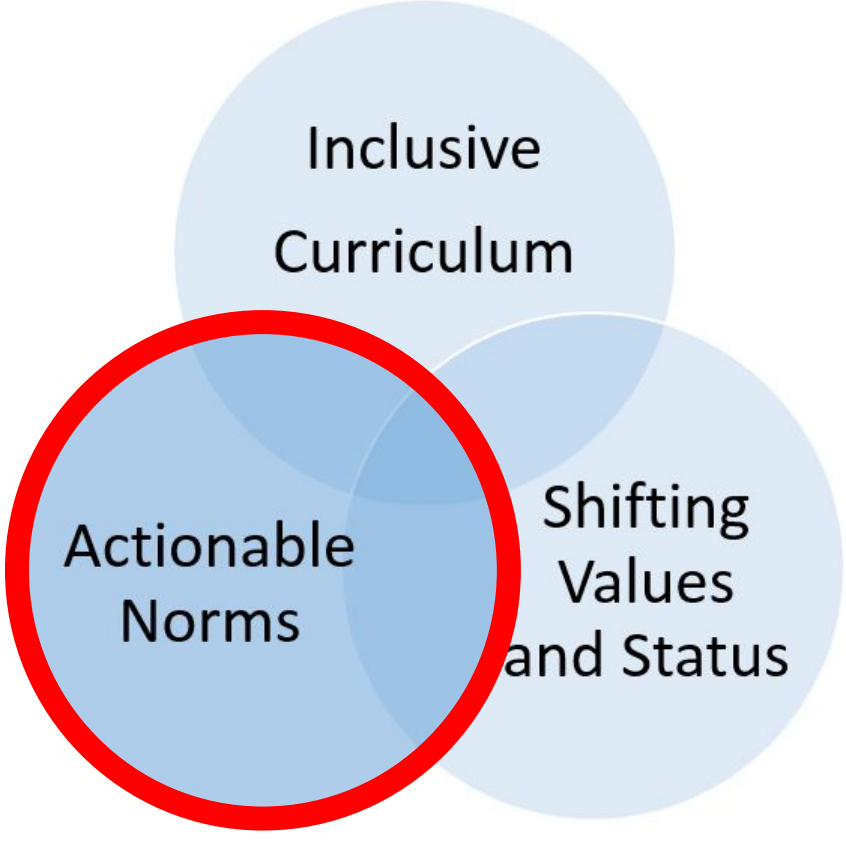
- *Moving from passive (raise hands, one voice, show respect) to actions that encourage learning*
- *Encourage learning and community building*

Big Ideas from a Complex Instruction Classroom

Work Persistently

Take Risks

Communicate Productively



Actionable Norms

Work Persistently

Take Risks

Communicate Productively

Which actionable norm sticks out to you and why?

TIC TAC TOE

- What's a good strategy to win?
- Where should you start?
- Who should go first?
- Where should you NOT start?

Your team will succeed today if...

- Show many patterns
  (arrows, words, numbers and colors)
- Use representations
  (graphs, tables, drawings, rules)

- Make connections
- Ask/rephrase/challenge/build
- Think beyond/ abstraction
- Communicate the journey

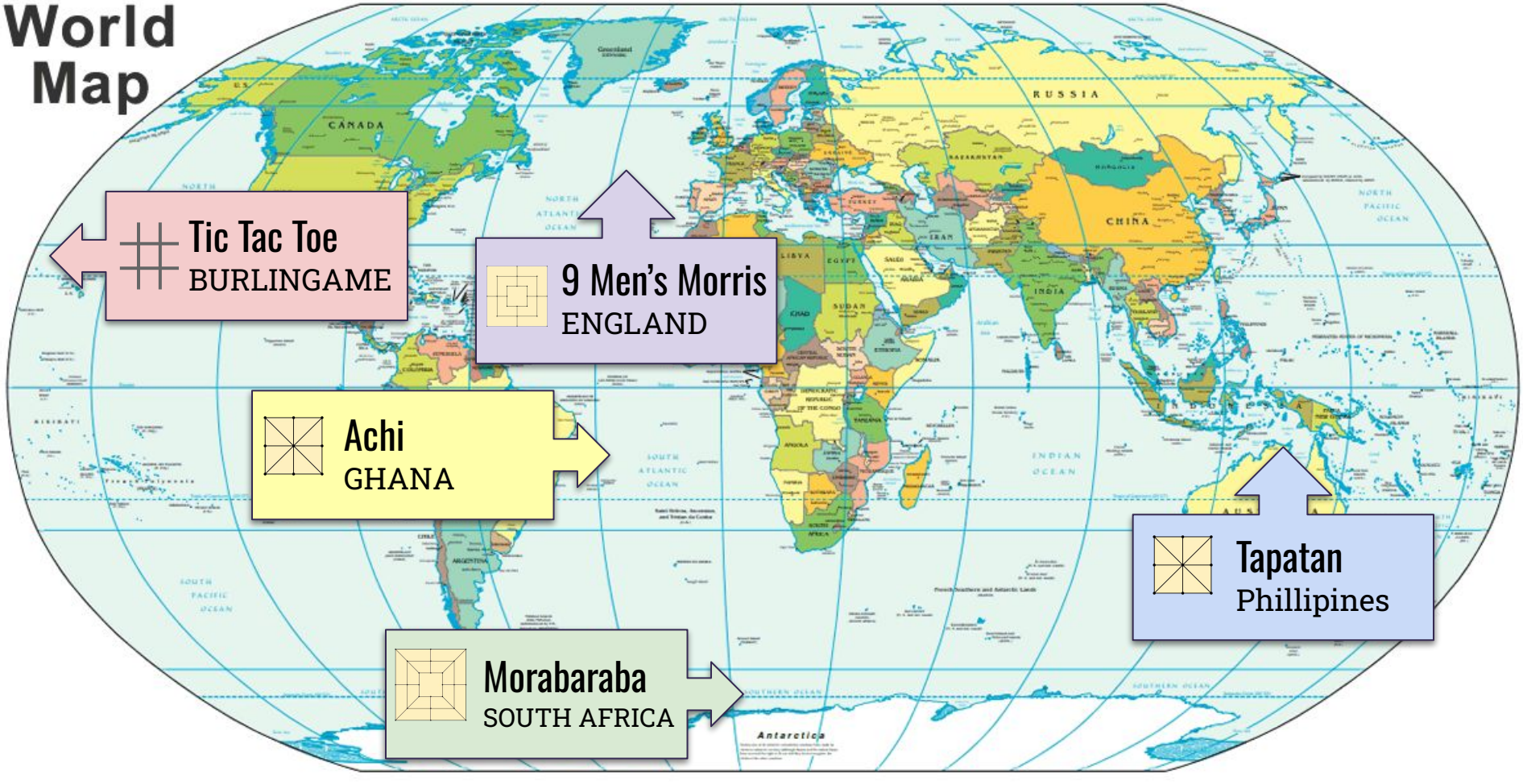
Share round robin (clockwise)

One thing I think I can bring…

One thing I need others to bring…

Silent thumbs up when your group has finished.

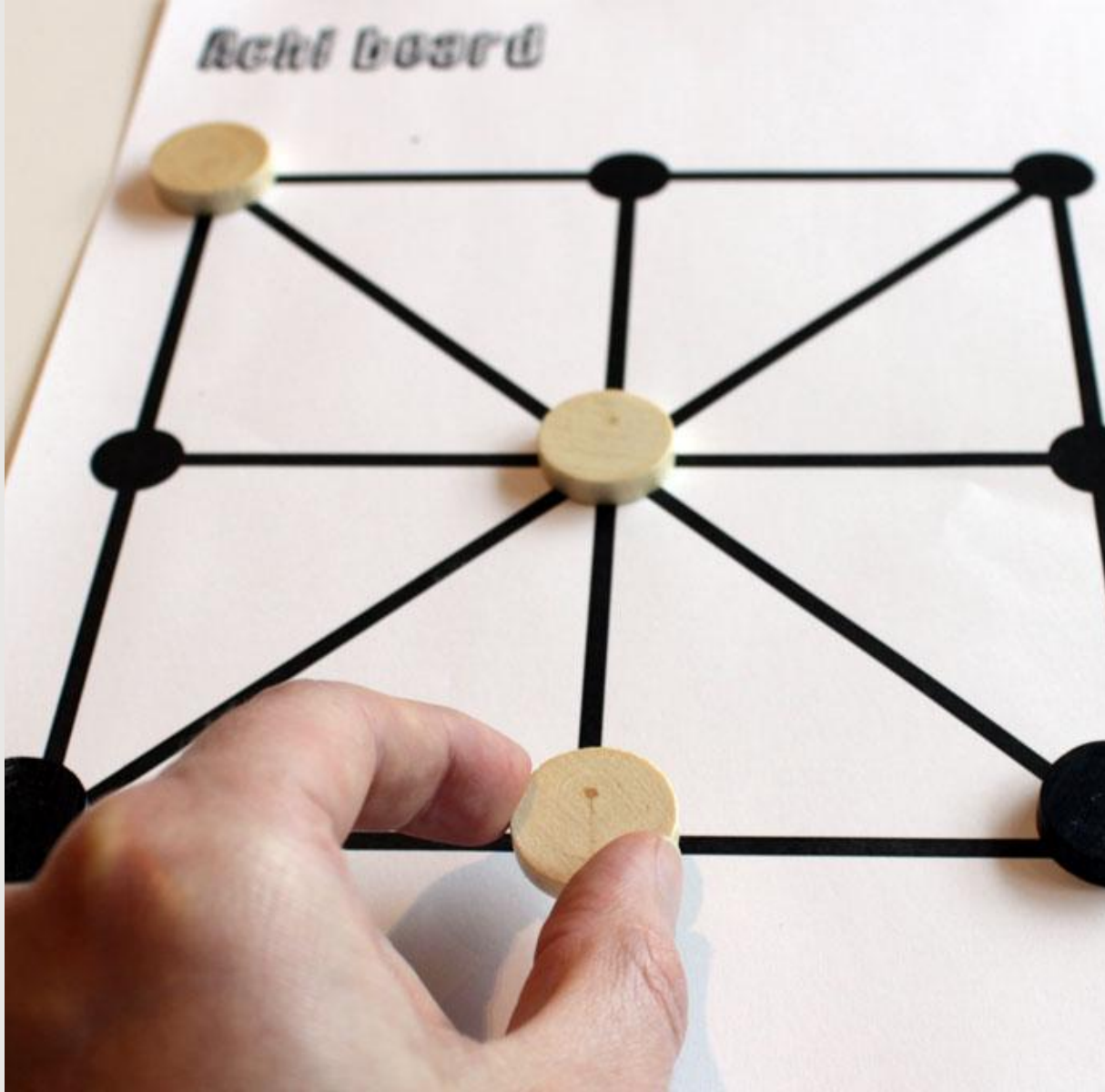
World Map



Many versions of Nine Men's Morris are played around the world.

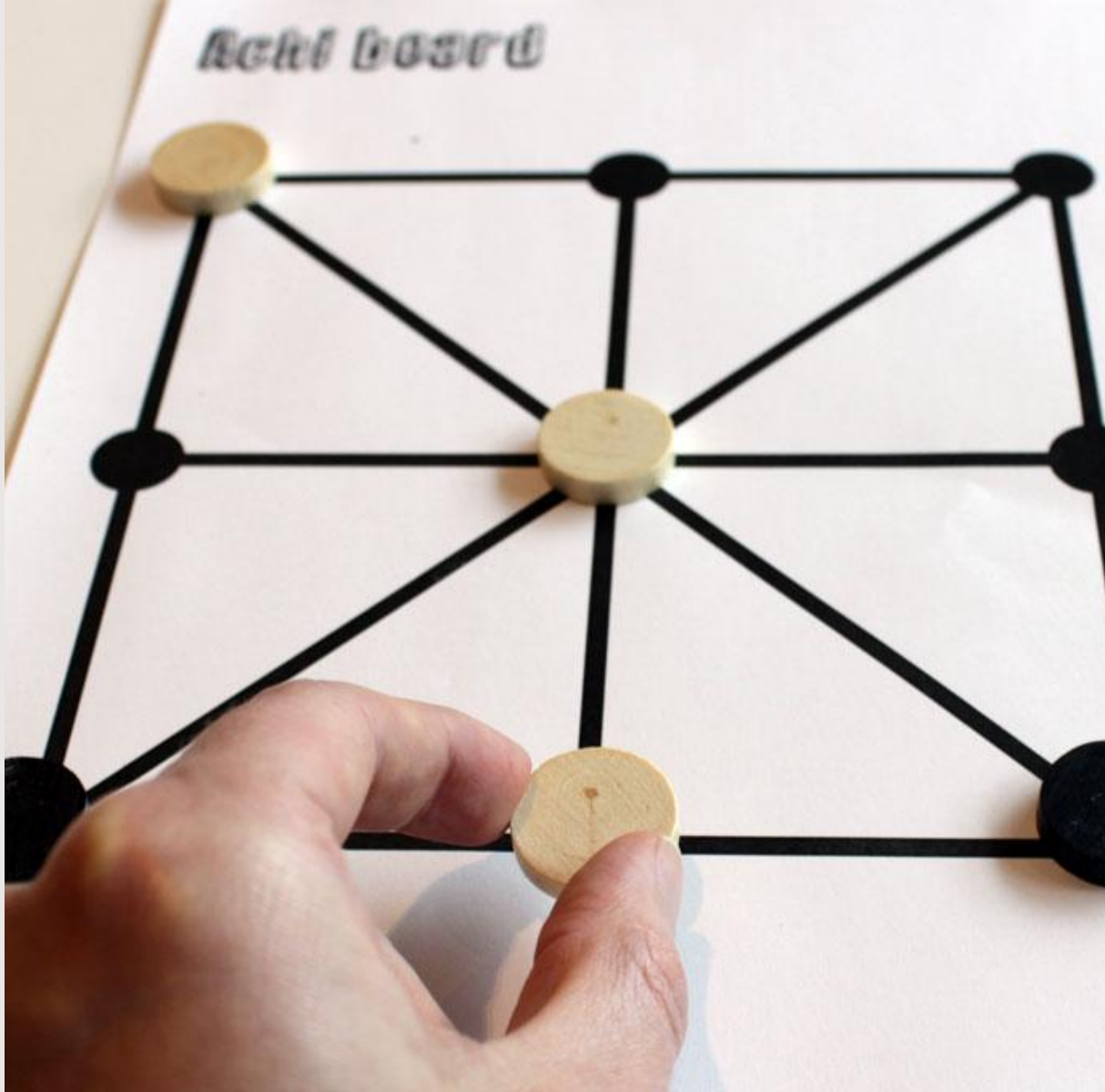
Achi

- 4 pieces each
- Take turns
- When all pieces have been played, can slide to adjacent point
- Winner = 3 in a row



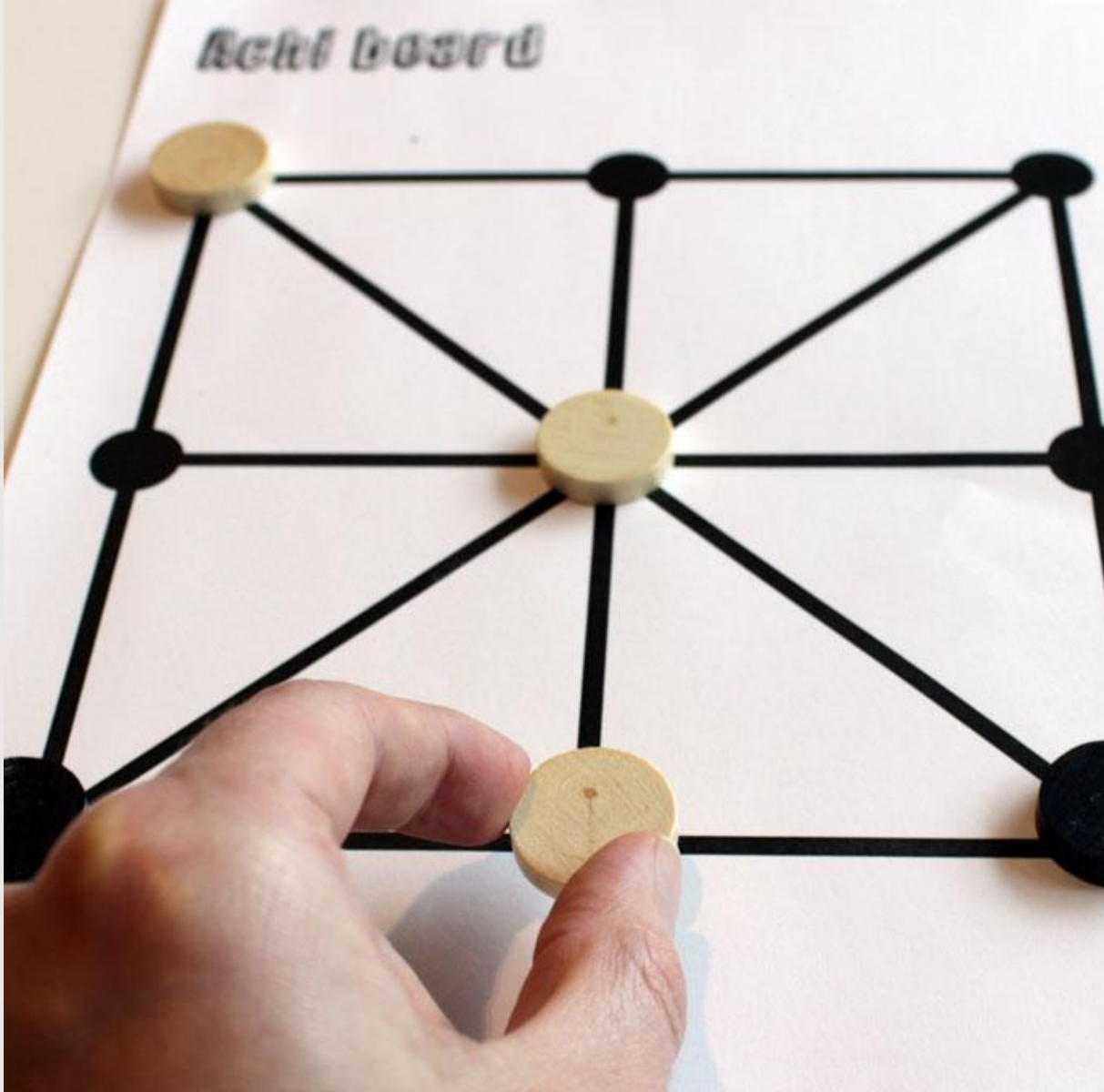
Achi

PLAY



Achi

- How do you win Achi?



Achi

- **How do you win Achi?**

Your task: write a 'how to win Achi' set of guidelines. Your guidelines should include:

- How many ways are there to make three in a row?
- Does either player have an advantage?
- Describe in detail the reason.
- Give an example of the moves and strategies in a winning game.
- Give an example of the moves and strategies in a winning game after a draw.

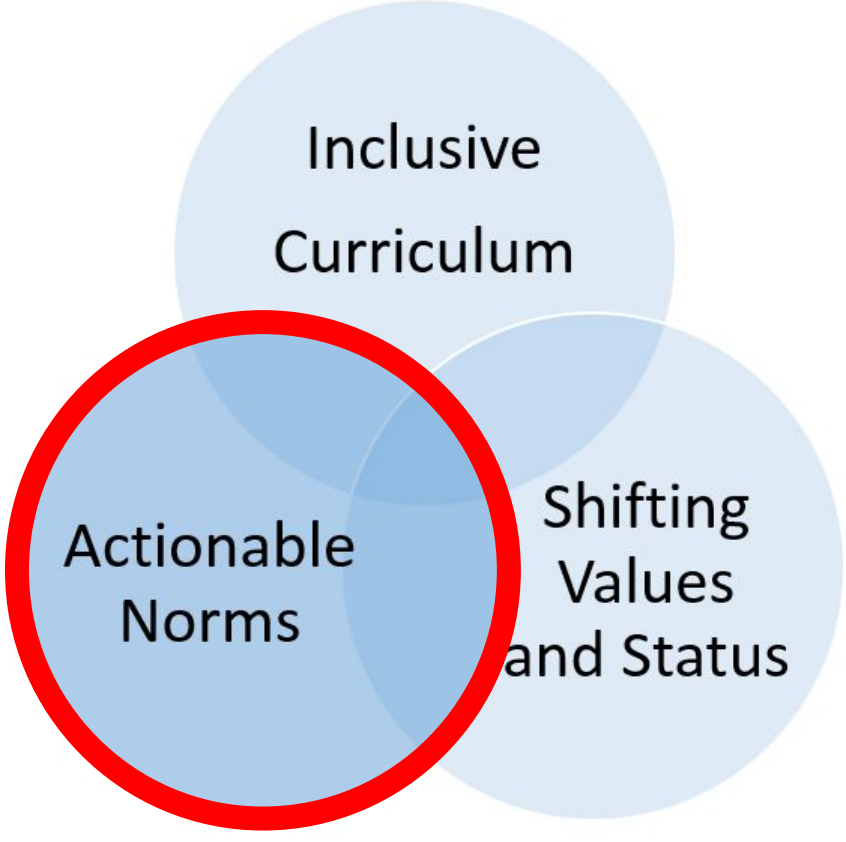
Big Ideas from a Complex Instruction Classroom

Work Persistently

Take Risks

Communicate

Productively



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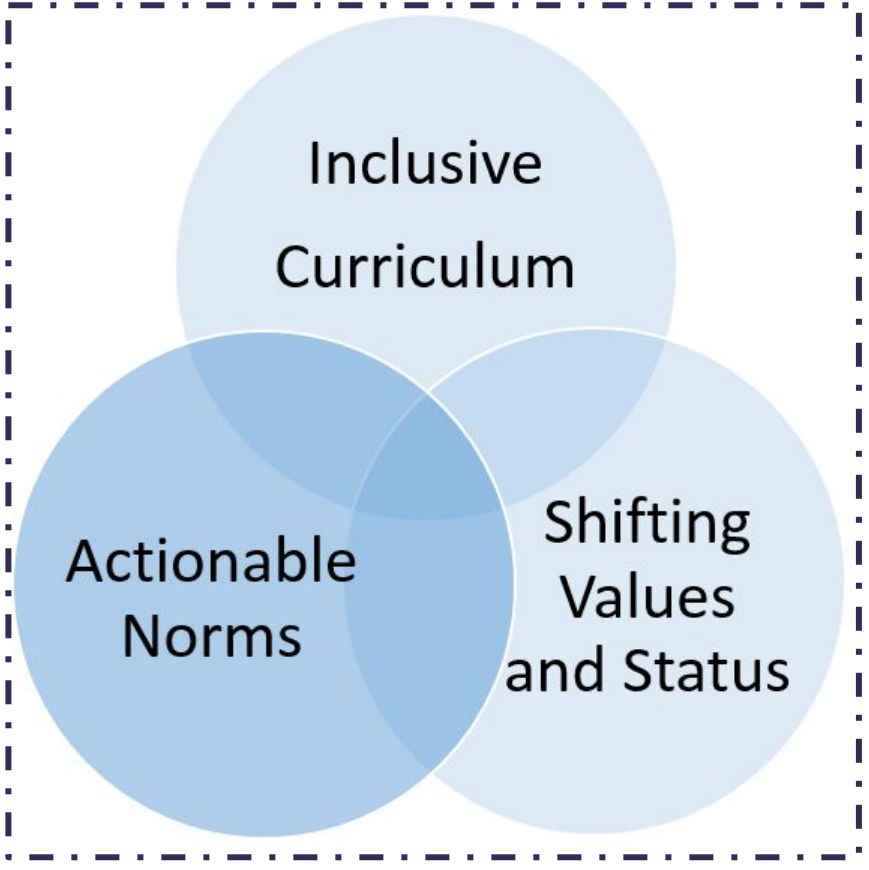
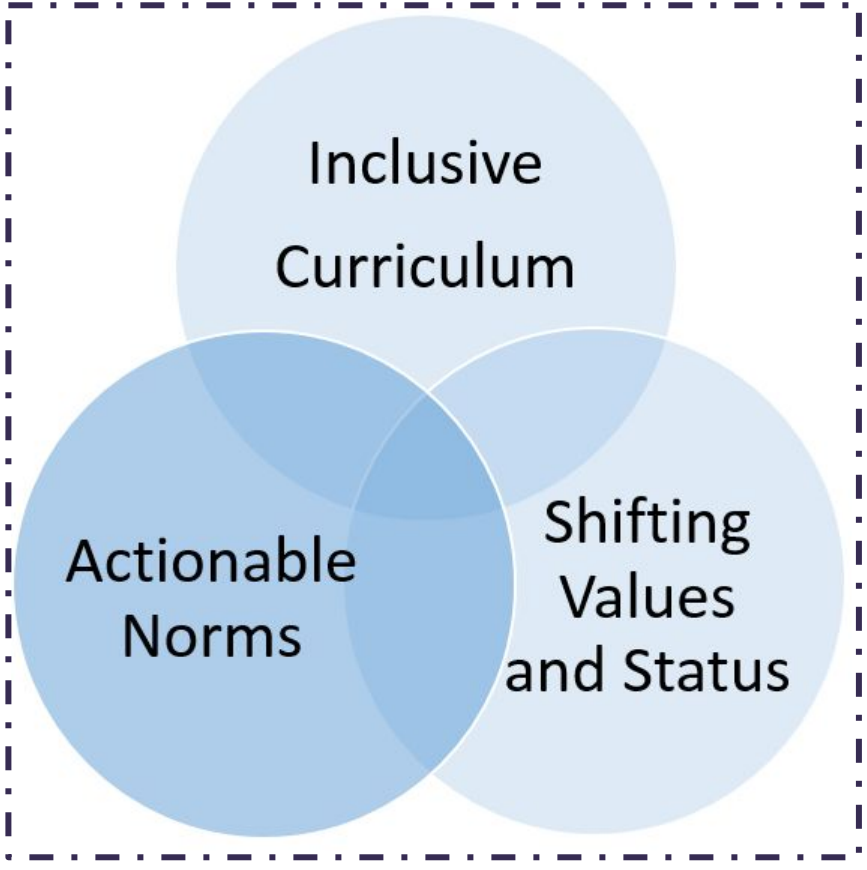


At your tables….

How did actionable norms influence your group working together?

How can you use concepts from Complex Instruction in your classroom this year?



Strategies we used...

Introduce CI

Focus on Status

Modifying a Lesson

Day 1

Day 2

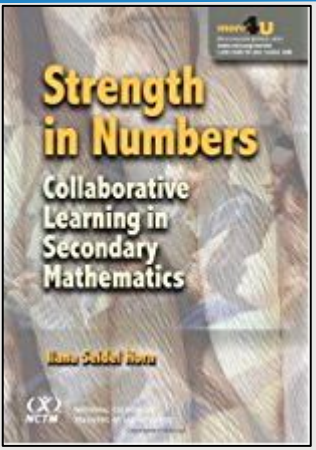
Day 3

Focus on Actionable Norms

Redefining Smarts

Focus on Inclusive Curriculum

Complex Instruction



- Johnson & Johnson (1994)
  - Organize classroom activities to be social and academic experiences
- Cohen & Lotan (1994)
  - *Groupwork Dynamics and Complex Instruction*
- Horn (2012)
  - *Strength in numbers: Collaborative learning in secondary mathematics.*
- Jo Boaler (2016)
  - *Mathematical Mindsets*
- Watanabe & Evans (2005)
  - *Assessments that Promote Collaborative Learning*