A New Approach to Teacher Preparation

High Meadows Graduate School of Teaching & Learning
Building toward the “Next Normal”

- As learning is changing, teacher prep must keep up.
- Covid 19 has been an accelerant of the changes underway
- *Teachers must learn in the way they will need to teach.*
High Meadows Graduate School

- Began as collaboration between WW Foundation and MIT
- Goal to preparation teachers for today’s classrooms and tomorrow’s schools
- User-centered, collaborative design
- Competency-based
- Learn through Challenges
- Clinical incorporates in-school and out-of-school experiences
Competency-based education

- Grounded in mastery—demonstration of skills/knowledge attained
- Competencies: teachable, measurable, centered on student learning
- Research based
- Cross-cutting core competencies
Challenges = problems of practice that target necessary skills, understandings, and dispositions

Progress through challenges provides practice >> increasing level of competency

Groups of challenges: foundational knowledge, learning for success in today’s classrooms, building toward tomorrow’s schools
Core Competencies

- Central to effective teaching
- Higher bar for mastery: consistency, quality, & self-awareness
- Revisited throughout program (taught AND assessed)
Assessment in a Competency-Based Program

Competency-based assessment = Performance-based assessment

- Purpose: to support learning
- Opportunity to identify, demonstrate, and reflect on learning
- Equity = consistent high expectations, but responsive to variable needs
- A humanizing experience
Where do we Assess Competencies?

Challenge work

- **Solutions** are opportunities to demonstrate competencies built into challenges, *spanning the curriculum*
  - Some competencies are assessed repeatedly in multiple challenges
- Types of assessment in challenges
  - Evidence of practice (slides, instructional tools, student work, reflection)
  - Observation of practice
  - Simulation

Portfolio

- 3 **process** competencies: *Thinking Like a Designer, Learning to Improve, and Collaborating for Change* assessed by committee review 2x/year.
- *Teaching for Justice* formative assessments and final portfolio
How do we Assess Competencies in Challenges?

**Sequential assessments:** Increase authenticity and scale as TCs progress through a challenge

- **Early assessments:** Design & practice
- **Later assessments:** Iterate and enact
- **Feedback, coaching, and revision**
  - Outside evaluators give feedback on TC work using single-point rubrics
  - Coaches and TCs dig into the feedback together, discuss and decide upon the TC’s next steps (including possible revision)
Example: Individualizing Learning

- **Topic**
  - How to make learning accessible and engaging for students with different identities, interests, preferences, and at different stages of understanding

- **Early in the curriculum**
  - TCs are somewhat new to the classroom. They are observing their mentor teacher and interacting with students, but may not be leading instruction.

- **3 Solutions**
  - **Solution 1**: Student Voice & Agency
  - **Solution 2**: Scaffold & Extend
  - **Solution 3**: Using Individualizing Learning to Teach for Justice
Example: Individualizing Learning

- **Solution 1: Student Voice & Agency**
  TCs are asked to seek student input about their learning preferences. TCs then redesign a lesson based on what they learn from students.

- **Learning Objectives**
  C-3.2 Provide opportunities for learners to engage with content and express their understanding in diverse ways.
  C-3.3 Design learning experiences that foster students’ agency, motivation, and interest.
Example: Individualizing Learning

Solution 2: Scaffold & Extend
TCs are asked to choose 3 real students with different levels of understanding, and observe them to assess their needs. TCs then create a differentiated learning experience that is accessible by all 3 students.

Learning Objectives
A-3.1 Use formative and summative assessments to implement new instruction in response to performance data.
C-3.1 Create opportunities that accommodate students with different levels of understanding.

For Martin
For a student like Martin, I wanted to put in some extensions that would challenge his thinking, but also maybe add a check-in with the teacher.
- One of the companies already has the extra layer of complexity of calculating the slope from a table.
- An extension would be something that hints at what’s to come but doesn’t quite go there yet.
  - Thinking of a phone company that is free for the first 12 months but after that there is a monthly charge. It’s kind of a piecewise graph: (e.g., \( y = \begin{cases} 0 & x < 12 \\ 100 & x \geq 12 \end{cases} \)) but students wouldn’t have to use that to make a graph.

For Simona
For a student like Simona, who seems to learn best by talking through mistakes and misconceptions, I thought it would be a good idea to:
- Build in opportunities to check-in with concepts along the way.
  - The teacher can check-in in person, too, but ONLY to "unstick" i.e. point her in the right direction if she is really stuck somewhere.
  - The goal is to have her go through the project as independently as possible.
- Build in opportunities to praise mistakes

For Nathan
For a student like Nathan, I was thinking of adding some scaffolds along the way so he could feel more confident in sharing his thinking.
- Creating a graphic organizer template for the poster can help provide a structure that guides students into including all the information as a scaffold.
  - This can make the poster less daunting and overwhelming.
- Important to add a question that furthers thinking, to give Nathan, and really all students a chance to be right and to add something to the conversation (even without any math!)
  - "Is there any information that you think we’re missing?"
  - "How do you choose a phone plan when you shop for one, really?"
**Solution 3: Using Individualizing Learning to Teach for Justice**
TCs are asked to reflect on their perceptions of their students’ ability, and how that affected the students they chose to work with for the Scaffold & Extend solution. TCs are asked to identify how their reflection will impact their future practice with students.

**Learning Objectives**
E-1.4 Interrogate their perceptions of students’ ability to learn.

“Going into this solution I believed that students who were not turning in work were struggling with math concepts more, and therefore unable to engage with the material. I saw struggling with the material as the cause, rather than the result. Through my scaffold and extension solution, I saw that when students had more opportunities to get practice done during class [...] we saw better student outcomes in work completion, formative assessment completion, and assessment grades. I then concluded that weaker math skills were the result of less practice, not the cause.”
What we mean by Teaching for Justice (TfJ)

Skillful teachers take personal responsibility for ways in which their teaching practice supports or hinders the pursuit of equity and justice for their students. Teachers recognize the power and privilege that comes with their identities and position in the classroom, and they actively work to question and confront any abuses of that power and privilege. Teachers continually question if and how policies and practices reproduce injustice and work to ensure equitable access to educational opportunities for all students.

Graduates will be able to interrogate the factors that contribute to inequities and take responsibility for fostering equity and justice for their students.
Learning Experiences: how we engage with TFJ

*Making Big Ideas Real* -- during a discussion on *Understanding by Design (2005)*, a seminal text on unit and lesson planning, we unpacked this quote:

> The general caution is that teachers… often fail to adequately consider the deficiencies in the students’ prior experiences -- and then wrongly think that what they need is more knowledge. (pp. 208)

What’s important in the message:

- Teachers sometimes skip thinking about students’ life experiences and mistakenly think what students need is more remediation, direct instruction, etc.

Critiques:

- Framing students’ prior experience as deficient is problematic.
- Ignores that students bring what Luis Moll et al. (1992) call *funds of knowledge*.
Assessing TC development of the Teaching for Justice competency

- Formative assessment at the GS
- Invites reflection about change in knowledge and dispositions over time
- Currently piloting a summative portfolio assessment that brings in the TFJ solutions

Solutions:

- The evidence can take many forms including video, audio recording, and written documents with artifacts.
- TCs reflect on two TFJ learning objectives, one chosen for them (aligned to the challenge) and one they must select.
- Three coaches with experience and expertise in teaching for justice debrief the solutions with each TC. Debriefs are non-evaluative.
Solution -
In MBIR we talked about math and science classes that are run algorithmically i.e., the teacher presents the pattern on the board, and then the students apply the pattern in a number of practice problems. This method also tells students that there is one way to solve this math and one way to think about it, and the different individual ways and methods that a student might create are frowned upon or discouraged. That's pretty disheartening.

Debrief-
We would send the message of "I and I alone know what's best for my students and how they should learn this material" therefore saying that my students shouldn't have a stake in how they learn. As a white educator, it is imperative that I question and critique the power I have in the classroom so as not to perpetuate white supremacy and its harmful ways, as what is a school but a microcosm of society?
An Operational Innovation Lab

- How must we prepare teachers for a new and uncertain environment?
- How will we support a multi-cultural, multi-racial population in ways that create a more just and equitable society?
- How can we best “model the model” for teacher candidates?
Experimentation/Iteration Processes:

• Grounding in Research & JEDI
• Try - Learn - Try
  ○ Prototype (MVP)
  ○ Observe, Interview
  ○ Co-ideate Revisions
  ○ Try again
• Targeted Universalism
  ○ Learn from our users who’ve struggled the most
JEDI Design Principles

- Design for the end result of equitable access to opportunity for diverse populations
- Design for flexibility and to be able to shift for different populations
- Design in ways that honor and incorporate a variety of strengths, assets, passions, and experiences
- Design by questioning our own experiences, bias, traditions, and expectations
Design Experiments

- **Structures** (Program, Systems)
- **Content** (Curriculum, Outcomes)
- **Methods** (Theory of Learning, Pedagogical Approach)
Covid-19

The future we had imagined -- one that calls for agile, creative teachers with the capacity to meet unforeseen challenges -- is happening right now in real time.

We are embracing this as an opportunity to accelerate some of the innovations that we had planned and are designing experiments to help us learn how to adapt in real time to a changed education landscape.
Design Experiments During Covid

• How might TCs practice and demonstrate competencies in the absence of school classroom environments without lowering our threshold for what we certify as “competent at the novice teacher level”?

• What is the right balance between synchronous and asynchronous learning (especially if working collaboratively is valued)?

• How do we foster teacher candidate engagement so that they are learning and supporting each other’s learning vs. being totally dependent on faculty coaches?

• How can we learn from TCs on-the-ground experience to help us co-define “what good looks like” in this new mode of teaching and learning?
What’s Next for Us?

- **Operate as a sandbox environment** to design programs of study and pilot them with its teacher candidates.
- **Build** a set of stackable credentials that will enable teachers to develop and deepen levels of competency.
- **Engage with schools of education** to study our impact and to incorporate our competency-based approach within their existing educator preparation programs.
- **Partner with districts** to strengthen the teacher pipeline
Questions or Comments?

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