



“How fascinating students’ ideas can be!”

Fostering asset-based responsive teaching
through teachers' epistemic empathy

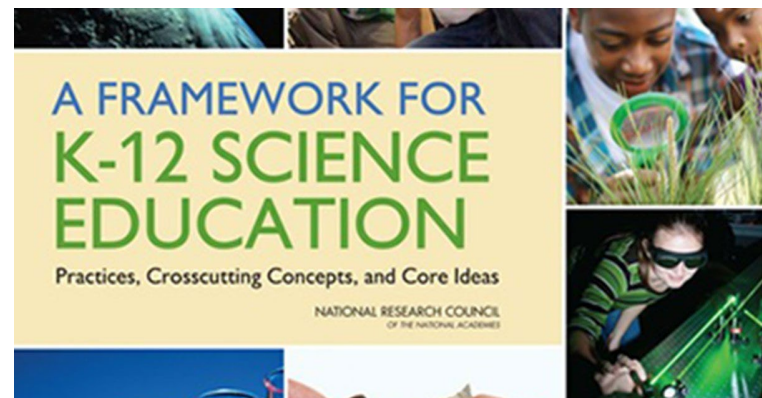
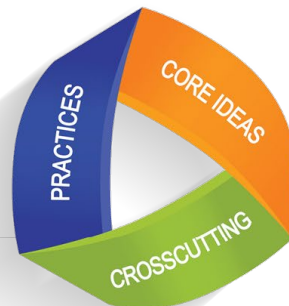
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Florida State University

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MAKING SENSE OF SCIENCE





What supports teachers to be responsive to students?

To be responsive, teachers need to move beyond their familiar and comfortable ways of thinking and feeling, to take learners' perspectives and to see how *to the learners*, their ideas and emotions make sense.

HOWEVER...

The discrepancy between teachers' and students' repertoires and frames of reference can make this work challenging!



Epistemic Empathy



Decentering from one's ways of sensemaking to take someone else's perspective and tune into their *intellectual* and *emotional* experiences within an epistemic activity.



Epistemic empathy as a driver for responsive teaching

Decenter from one's ways of sense-making to take another's perspective

Value and appreciate learners' *intellectual* and *emotional* experiences

Respond in ways that build on and centers learners' ideas, emotions, and brilliance

EPISTEMIC EMPATHY

EXPANSIVE & EQUITABLE RESPONSIVE TEACHING



Markers of Epistemic Empathy



- Interpret and explain—instead of judge—learners' reasoning and actions
- Notice and value learners' feelings and emotions
- Express curiosity and interest in learners' reasoning
- Identify merits in learners' ways of thinking
- Anticipate learners' ideas and feelings
- Channel personal experiences to connect with learners' intellectual and emotional experiences

Cultivating teachers' epistemic empathy to support responsive teaching



Reading about
diverse ways of
knowing



Engaging as
learners in
science



Analyzing videos of
student inquiry



Closely interacting
with students



Cultivating teachers' epistemic empathy to support responsive teaching



Reading about diverse ways of knowing



Engaging as learners in science



Analyzing videos of student inquiry



Closely interacting with students



Reading about
diverse ways of
knowing



A key takeaway from the article is that **many of these children bring valuable and insightful talks and discussions into the class and should be recognized.** I thought the example of Elena was really wonderful. **Seeing a different way of how to notice how something is growing was really deep and beautiful to hear. Her contributions were valuable because she invited a new way to see the growth and promoted a deep discussion.**

Ballenger, C., & Carpenter, M. (2004). The puzzling child: Challenging assumptions about participation and meaning in talking science. *Language Arts*, 81(4), 303.

Reading about
diverse ways of
knowing



The way we explain a concept might differ structurally from how another person explains the same concept ... Linguistic differences often get mistaken for lack of elegance, intellect, or ability to communicate ideas effectively in the classroom. **When we really listen to what students have to say, we come to see the validity in the points they are making, and their abilities to learn and engage in science become clear.**

Robertson, A. D., & Elliott, L. J. A. (2017). "All students are brilliant": A confession of injustice and a call to action. *The Physics Teacher*, 55(9), 519-523.

Cultivating teachers' epistemic empathy to support responsive teaching



Reading about
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Engaging as
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Analyzing videos of
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Closely interacting
with students



Engaging as
learners in
science



The first class, everybody was like, “I don’t understand what we’re supposed to be doing” ... but **it gave us an idea of how the kids-** well at first we were all like, “Well **I’m not writing that. I feel stupid if I write that.**” And [the instructors’] point was, “**that’s how the kids feel**” “You might feel like that kid who’s afraid to raise their hand because they think their answer is wrong.” **So it was kind of learning through empathy.**

Cultivating teachers' epistemic empathy to support responsive teaching



Reading about
diverse ways of
knowing



Engaging as
learners in
science



Analyzing videos
of student inquiry



Closely interacting
with students



This video has definitely been the most impactful, since it showed me **how fascinating some students' ideas can be** when left to their own reasoning! **I will be curious to see what ideas my students come up with for reasoning about physical phenomena**, and then trying to use their ideas for their advantage to shape how I respond.

Just to see **how differently every student thinks about the processes of cloud formation and precipitation is mind blowing!** **All the students have some productive beginnings in their thinking** that could really be something to look at and consider seriously.

Analyzing videos of student inquiry



https://as.tufts.edu/education/responsiveteachinginscience/modules/pd/watercycle_cloudsrain_kerri.html

Cultivating teachers' epistemic empathy to support responsive teaching



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Closely interacting
with students



Closely interacting
with students



Having this science discussion and having the students bring up the ideas being discussed showed me that **students are extremely intelligent and have great potential...it was extremely impressive to see them come up with these ideas.**



The role of epistemic empathy in responsive teaching





By centering students' ideas, emotions, and brilliance, epistemic empathy supports teachers to frame instruction as about attending and responding to students' experiences and sense-making in ways that **affirm students' humanity and dignity** and cultivate their own personal relationships with the discipline.

Moving forward...

- How can we continue to design teacher education and PD programs that cultivate epistemic empathy as a target for teacher learning?
- How do we grapple with the tensions that emerge in this work, especially with regards to equity, and in relation to issues of power and status?
- How might teachers' epistemic empathy nurture students' own empathy for one another's experiences and perspectives in ways that foster more inclusive and compassionate science classrooms?

“Well that’s how the kids feel!”—Epistemic empathy as a driver of responsive teaching

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Abstract


While research shows that responsive teaching fosters students’ disciplinary learning and equitable opportunities for participation, there is yet much to know about how teachers come to be responsive to their students’ experiences in the science classroom. In this work, we set out to examine whether and how engaging teachers *as learners* in doing science may support responsive instructional practices. We draw on data from a year-long blended-online science professional development (PD) program that began with an emphasis on teachers’ doing science and progressed to supporting their attention to their students’ doing science. By analyzing videos from teachers’

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“He got a glimpse of the joys of understanding” – The role of epistemic empathy in teacher learning

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ABSTRACT

Background: Efforts to promote reform-based instruction have overlooked the import of affect in teacher learning. Drawing on prior work, I argue that teachers’ affective experiences in the discipline are integral to their learning how to teach the discipline. Moreover, I suggest that both affective and epistemological aspects of teachers’ experiences can serve to cultivate their *epistemic empathy*—the capacity for tuning into and valuing someone’s intellectual and emotional experience within an epistemic activity—in ways that support student-centered instruction.

Methods: Using a case study approach, I examine the learning journey of one preservice teacher, Keith, who after having expressed strong skepticism about responsive teaching, came to value and take up responsive teaching in his instruction.

Findings: The analysis identifies epistemological and affective dynamics in Keith’s interactions with stu-

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Thank you!

We look forward to continuing the
discussion!

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