



THE  
FLORIDA STATE  
UNIVERSITY



# Attending to Affective and Relational Dynamics in Professional Learning Settings

**Lama Jaber**  
Florida State University

**CADRE Learning Series**  
**March 2022**



RESPONSIVE TEACHING IN SCIENCE

Resources for Responsive Teaching in Science

Home

The Responsive Teaching Project

Responsive Teaching

Responsive Curricula

Responsive Teaching and the NGSS

Professional Development

Responsive Teaching Toolbox

Suggested Reading

Responsive Teaching in Science Home

Responsive teaching refers to the practices of attending and responding to the substance of students' thinking. Instructional next moves arise out of the teachers' sense of what students have been saying and doing, and they often entail adapting plans and objectives within a particular lesson while still working toward larger learning goals. This website is a prototype of curriculum and professional development to support responsive teaching.

InterLACE

Teacher Dashboard

About

Help

Community Forum

Recent Sessions

Activity

Group

Posts

New

Teaching Journal	Fall 2014 ED-211	21	1
Reflections on Reading or Video	Fall 2014 ED-211	146	4
Pedagogical Question Bank	Fall 2014 ED-211	9	0
Community Forum	Fall 2014 ED-211	327	5
Current Consensus Ideas	Fall 2014 ED-211	32	0

Manage

Sessions

Activities

Collections

Groups

Browse

Community

Recent Posts

Some feedback for you--embedded as "comment" Word document.

Hi I'm reading your broader explanation of... I completely agree that... I also agree that there must be... I have been... I hope this makes sense (visuals pictures would probably help).

I am a very visual person and I am intrigued with... I am having trouble understanding your description of these shifts in the... energy, and low pressure vacuum and how it is... I will be interested during our next face to face... to see if I can better understand this flow... thinking.

What is the difference between viscosity and surface tension? Naturally, a more viscous fluid will flow... slowly during the siphoning process. Viscous fluids... more resistant to movement and flow. When I think... surface tension, I think of clinging. For example, a... molecules clinging to one another when they are... on a penny.

Here is what I am now wondering -- when the tube... the holding tank in the shape of a rainbow, all of the... the tube flows to the side with more water. Why is... water on the other side of the tube follow? I know!



Learning Through Collaborative Design

Analyze

Examine and reflect upon video clips and student artifacts from the enacted lesson.

Collaborative Design

Co-construct lessons with a community of teachers and facilitators.

Teach

Teach the co-designed lesson in your classroom.

Refining practice to foster productive student science talk (i.e., thinking in the service of making sense of phenomena).

Collaborative Design

Summer Professional Development

In-School Cycles of Collaborative Design (N=4)

CAREER: Cultivating Teachers' Epistemic Empathy to Promote Responsive Teaching

This project investigates the construct of "epistemic empathy" and examines how it can be cultivated in teacher education, how it functions to promote responsive teaching, and how it shapes learners' engagement in the classroom. Epistemic empathy is defined as the act of tuning into and appreciating another's cognitive and emotional experience within an epistemic activity aimed at the construction, communication, and critique of knowledge.





Vesal Dini



Carla Finkelstein



David Hammer



Sherry Southerland



Jessica Watkins



Shannon Davidson



RESPONSIVE TEACHING IN SCIENCE

Resources for Responsive Teaching in Science

Home

The Responsive Teaching Project

Responsive Teaching

Responsive Curricula

Responsive Teaching and the NGSS

Professional Development

Responsive Teaching Toolbox

Suggested Reading

Responsive Teaching in Science Home

Responsive teaching refers to the practices of attending and responding to the substance of students' thinking. Instructional next moves arise out of the teachers' sense of what students have been saying and doing, and they often entail adapting plans and objectives within a particular lesson while still working toward larger learning goals. This website is a prototype of curriculum and professional development to support responsive teaching.

InterLACE

Teacher Dashboard

About

Help

Community Forum

Recent Sessions

Activity

Group

Posts

New

Teaching Journal	Fall 2014 ED-211	21	1
Reflections on Reading or Video	Fall 2014 ED-211	146	4
Pedagogical Question Bank	Fall 2014 ED-211	9	0
Community Forum	Fall 2014 ED-211	327	5
Current Consensus Ideas	Fall 2014 ED-211	32	0

Manage

Sessions

Activities

Collections

Groups

Browse

Community

Recent Posts

View 3 Posts

Some feedback for you--embedded as 'comment' Word document.

Hi I'm reading your broader explanation of siphoning mechanism. I completely agree that the change in pressure and gravity are necessary for siphoning to occur. I also agree that there must be unbalanced forces for the flow to occur. I have been experimenting with just the tubing in a rainbow shape siphoning set up. In both cases, the flow of water is controlled by simply adjusting the balance of force adjusting the forces, the water could flow in either remain statically still. I hope this makes sense (visuals/pictures would probably help).

I am a very visual person and I am intrigued with about the shift of forces and energy. I am having trouble understanding your description of these shifts in the energy, and low pressure/vacuum and how it is all flow. I will be interested during our next face to face meeting, to see if I can better understand this flow thing.

What is the difference between viscosity and surface tension? Naturally, a more viscous fluid will flow slowly during the siphoning process. Viscous fluids more resistant to movement and flow. When I think surface tension, I think of clinging. For example, a molecule clinging to one another when they are close on a penny.

Here is what I am now wondering -- when the tube is holding back in the shape of a rainbow, all of the the tube flows to the side with more water. Why is water on the other side of the tube follow? I know?



Learning Through Collaborative Design

Analyze

Examine and reflect upon video clips and student artifacts from the enacted lesson.

Collaborative Design

Co-construct lessons with a community of teachers and facilitators.

Teach

Teach the co-designed lesson in your classroom.

Refining practice to foster productive student science talk (i.e., thinking in the service of making sense of phenomena).

Collaborative Design

Co-construct lessons with a community of teachers and facilitators.

Summer Professional Development

In-School Cycles of Collaborative Design (N=4)

CAREER: Cultivating Teachers' Epistemic Empathy to Promote Responsive Teaching

This project investigates the construct of "epistemic empathy" and examines how it can be cultivated in teacher education, how it functions to promote responsive teaching, and how it shapes learners' engagement in the classroom. Epistemic empathy is defined as the act of tuning into and appreciating another's cognitive and emotional experience within an epistemic activity aimed at the construction, communication, and critique of knowledge.



RESPONSIVE TEACHING IN SCIENCE

Resources for Responsive Teaching in Science

Home

The Responsive Teaching Project

Responsive Teaching

Responsive Curricula

Responsive Teaching and the NGSS

Professional Development

Responsive Teaching Toolbox

Suggested Reading

Responsive Teaching in Science Home

Responsive teaching refers to the practices of attending and responding to the substance of students' thinking. Instructional next moves arise out of the teachers' sense of what students have been saying and doing, and they often entail adapting plans and objectives within a particular lesson while still working toward larger learning goals. This website is a prototype of curriculum and professional development to support responsive teaching.

InterLACE

Teacher Dashboard

About

Help

Community Forum

Recent Sessions

New Session

Activity	Group	Posts	New
Teaching Journal	Fall 2014 ED-211	21	1
Reflections on Reading or Video	Fall 2014 ED-211	146	4
Pedagogical Question Bank	Fall 2014 ED-211	9	0
Community Forum	Fall 2014 ED-211	327	5
Current Consensus Ideas	Fall 2014 ED-211	32	0

Manage

Sessions

Activities

Collections

Groups

Browse

Community

Recent Posts

Some feedback for you--embedded as "comment" Word document.

Hi I'm reading your broader explanation of the siphoning mechanism. I completely agree that the change in pressure and gravity are necessary for siphoning to occur. I also agree that there must be unbalanced forces for the flow to occur. I have been experimenting with just the tubing in a rainbow shape siphoning set up. In both cases, the flow of water is controlled by simply adjusting the balance of forces adjusting the forces, the water could flow in either remain statically still. I hope this makes sense (visuals/pictures would probably help).

I am a very visual person and I am intrigued with the about the shift of forces and energy. I am having trouble understanding your description of these shifts in the energy, and low pressure/vacuum and how it is all flow. I will be interested during our next face to face gathering, to see if I can better understand this flow thing.

What is the difference between viscosity and surface tension? Naturally, a more viscous fluid will flow slowly during the siphoning process. Viscous fluids are more resistant to movement and flow. When I think surface tension, I think of clinging. For example, a molecule clinging to one another when they are on a penny.

Here is what I am now wondering -- when the tube is holding back in the shape of a rainbow, all of the the tube flows to the side with more water. Why is water on the other side of the tube follow? I know I

Learning Through Collaborative Design

Collaborative Design

Co-construct lessons with a community of teachers and facilitators.

Summer Professional Development

Analyze

Examine and reflect upon video clips and student artifacts from the enacted lesson.

Collaborative Design

Co-construct lessons with a community of teachers and facilitators.

Teach

Teach the co-designed lesson in your classroom.

In-School Cycles of Collaborative Design (N=4)

Refining practice to foster productive student science talk (i.e., thinking in the service of making sense of phenomena).

CAREER: Cultivating Teachers' Epistemic Empathy to Promote Responsive Teaching

This project investigates the construct of "epistemic empathy" and examines how it can be cultivated in teacher education, how it functions to promote responsive teaching, and how it shapes learners' engagement in the classroom. Epistemic empathy is defined as the act of tuning into and appreciating another's cognitive and emotional experience within an epistemic activity aimed at the construction, communication, and critique of knowledge.

5



# Blended online PD program for elementary and middle school science teachers centered on doing science



**Course 1:**  
Experiencing  
Scientific Inquiry



**Course 2:**  
Experiencing &  
Teaching Scientific  
Inquiry

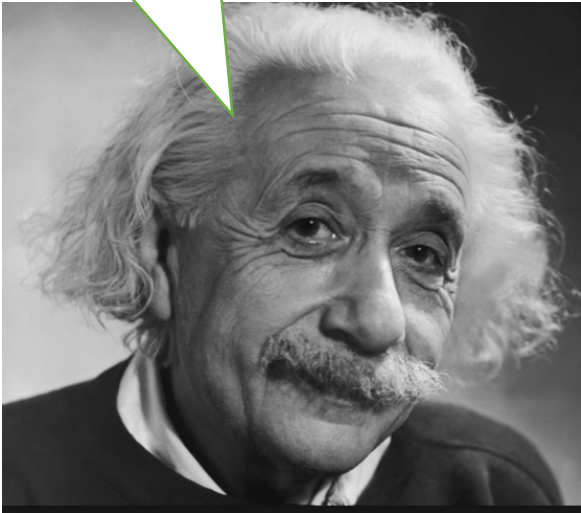


**Course 3:**  
Responsive Teaching  
in Science



# Experiencing Scientific Inquiry in the PD

Science is nothing more than a refinement of everyday thinking.



## From the Course Syllabus

**The course places you at its heart.** ... Unlike curricula that carve out a predetermined path, **this course relies on you** to ask questions and generate tangible, sensible explanations about natural phenomena...



# In the first few weeks of the PD...

I need to buy into this process more. I feel that we extended a topic for the time being and need to move on.



[www.faccinefb.com](http://www.faccinefb.com)

You asking us to think for three weeks about a helium balloon, I was done with that.



There was no way I could hold a candle to the ideas coming out of some people's mouths!...  
I was getting discouraged with how "smart" other people were





# In the first few weeks of the PD...



There's so many different things to be looking at. There's the forum, there's the journal, there's the notebook...it gets to the point where I can't remember which I commented on

I really feel like I don't fit in - like I have nothing to contribute, and it frustrates me because I don't like feeling "stupid". I am not sure if this is for me 😞



I stopped reading what you two were writing because I felt stupid, quite honestly... I don't know if other people are kinda feeling that way







Teaching and Teacher Education

Volume 23, Issue 6, August 2007, Pages 970-984



## Mathematics professional development for elementary teachers: Building trust within a school-based mathematics education community

Paola Sztajn , Amy J. Hackenberg, Dorothy Y. White, Martha Allexsaht-Snider

“Teachers who are learning and changing their practices are in a potentially delicate position because they are vulnerable to their peers’ opinions, the professional developers’ perceptions, and their administrators’ expectations”

(Sztajn et al., 2007, p. 973).





Carla Finkelstein  
Towson University

As PD interactions involve negotiations of power and knowledge, they invoke issues of who holds authority and whose expertise and beliefs are valued.

These contestations can provoke intense emotion and tensions that potentially hinder learning and engagement.

In other words, participating in PD can be a threatening experience for teachers, who may feel that they are being judged or exposed as deficient.

- Finkelstein, C. (2019) "Doing our part": Trust and relational dynamics in literacy coaching. *Literacy Research and Instruction*, 58(4), 317-337.
- Finkelstein, C. (2016). "Thank you so much for the truth!" Building trust in professional development. *Phi Delta Kappan*, 97(7), 19-24.





## PREPARING AMERICA'S STUDENTS FOR COLLEGE & CAREER




## EQUITY

# JUSTICE



## Science Education



SCIENCE TEACHER EDUCATION |  Full Access

**“Do I feel threatened? No... I’m learning!”—Affective and relational dynamics in science professional development**

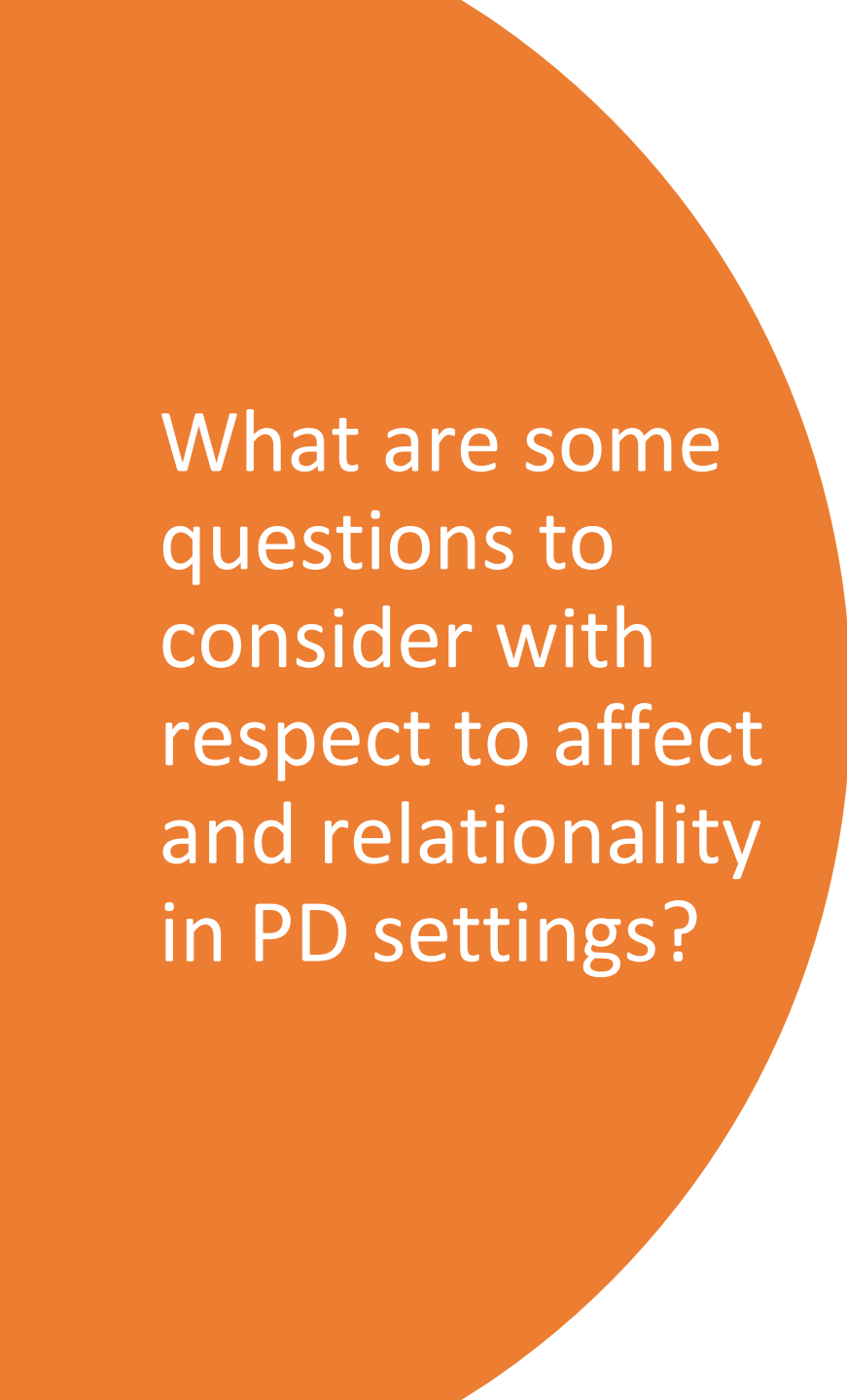
Carla Finkelstein , Lama Z. Jaber, Vesal Dini

First published: 31 December 2018 | <https://doi-org.proxy.lib.fsu.edu/10.1002/sce.21489> |

“Whereas the characteristics for high-quality PD reflect current thinking about the cognitive aspects of learning, they undertheorize the influence of affective and relational aspects of learning in interactions.”

(Finkelstein et al., 2019, p. 341)



A large orange circle is positioned on the left side of the slide, partially cut off by the edge.

What are some questions to consider with respect to affect and relationality in PD settings?

- How do affective and relational tensions around power, authority, and knowledge manifest within PD interactions?
- How might participant positioning and negotiation of expertise contribute to or alleviate these tensions?
- How might PD facilitators respond to these tensions in ways that foster learning and mitigate resistance?



# So returning to these first weeks...

I need to buy into this process more. I feel that we extended a topic for the time being and need to move on.



You asking us to think for three weeks about a helium balloon, I was done with that.



I was getting discouraged with how "smart" other people were






# Design considerations

1. Make room for participants to share their emotions, anxieties, and concerns
2. Attend and respond to participants' affective and relational experiences
3. Humanize the PD... and allow yourself to be vulnerable!







## **Consideration 1:** Make room for participants to share their emotions, anxieties, and concerns

- Anticipate moments or experiences that might raise feelings of resistance or vulnerability and filter in time around them to check-in with participants
- Regularly seek out anonymous and public forms of feedback
- Provide opportunities for participants to check in with one another and reflect on how things are going together

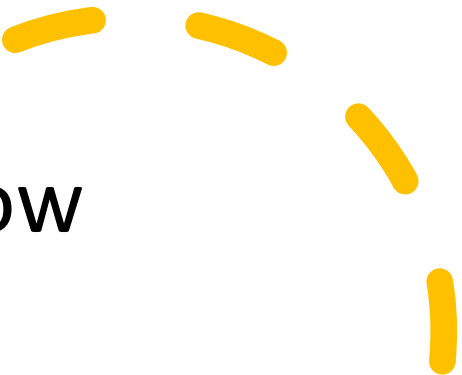




## **Consideration 2:** Attend and respond to participants' affective and relational experiences

- Honor participants' experiences and respond to them in ways that communicate care and build trust
  - Name, validate, and normalize participants' vexations, and support them to introspect into their emotions and worries
  - Pay extra attention to participants who express anxiety or frustration and personalize your communication with them to help them feel seen and recognized
- 





## **Consideration 3: Humanize the PD... and allow yourself to be vulnerable!**

- Acknowledge and recognize that this work is hard
- Approach the work with a stance of humility, openness, and curiosity
- Share your vulnerabilities, puzzlements, and excitements with your PD participants.



**We're in it together and we're all learning!**



# ... later in the PD



I wish [this science discussion] could have gone on for another two hours!!... The more I think about it, the more questions I have!... This class has definitely made me look at the world differently!



This class is messing with my head! (in a good and annoying way!!) I can't stop asking why and how come and looking for inconsistencies in things!

how come two objects, regardless of mass, reach the ground at the same time when dropped from the same height?!?!?! This was making me crazy [...] I've taught this unit for 10 years and never noticed or wondered about this before! [...] This class is making me think about everything so differently!!!  
Thank you AND make it stop! ;)

- Jaber, L. Z., Dini, V., Hammer, D., & Danahy, E. (2018). Targeting disciplinary practices in an online learning environment. *Science Education*, 102(4), 228-292.
- Watkins, J., Jaber, L. Z., & Dini, V. (2020). Facilitating scientific engagement online: Responsive teaching in a science professional development program. *Journal of Science Teacher Education*, 31(5), 515-536.
- Jaber, L. Z., Dini, V., & Hammer, D. (2022). "Well that's how the kids feel!"- Epistemic empathy as a driver of responsive teaching. *Journal of Research in Science Teaching*, 59(2), 223-251.





THE  
FLORIDA STATE  
UNIVERSITY



# Thank you!

**Please feel free to contact me at:**

Lama Jaber [ljaber@fsu.edu](mailto:ljaber@fsu.edu)