

## Action-Reaction

Reflections on the dynamics of teaching

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## Pseudoteaching

### Launch Feb 21, 2011:

- [Pseudoteaching: MIT Physics](#) by Frank Noschese (Action-Reaction)
- [Pseudoteaching: Hunting Monkeys](#) by John Burk (Quantum Progress)
- [Pseudoteaching: What Was Complex Becomes Routine](#) by Dan Meyer (dy/dan)
- [Pseudoteaching with Demos](#) by Jerrid Kruse (Teaching as a Dynamic Activity)
- [Pseudoteaching](#) by Rhett Allain (Dot Physics)

### Update Feb 22, 2011:

- [Pseudoteaching FAQ](#) by John Burk (Quantum Progress)
- [Pseudoteaching: Laboratory Experiments](#) by Dolores Gende (Journey in Technology)

### Update Feb 25, 2011:

- [Pseudoteaching: A Tale of Two Teas](#) by Michal Lynch (ActiveGrade Blog)

### Update Feb 27, 2011:

- [Pseudoteaching – Clayton's Learning?](#) by Chris Keipert (Chemistry Chris)

### Update Mar 1, 2011:

- [Pseudoteaching by Inquiry](#) by John Burk (Quantum Progress)
- [Oreos and Pseudoteaching](#) by Janelle Wilson (Stretching Forward)

### Update Mar 2, 2011:

- [Going through the motions with the best intentions](#) by Terence Gilheany (guest post at Quantum Progress)
- [Pseudoteaching with a Purpose?](#) by Joshua Gates (Newton's Minions)
- [Pseudoteaching doesn't Happen in a Vacuum](#) by Ed Hitchcock (Teach Science (.net))

### Update Mar 5, 2011:

- [Pseudolearning](#) by Mr. K (Math Stories)
- [Online pseudoteaching](#) by Andy Rundquist (I'm not watching TV)
- [Technology and Pseudoteaching](#) by Steve Dickie (Free/Libre Open Source Science Education)

#### **Update Mar 15, 2011:**

- [Hook It to Something They Already Know](#) by Kate Nowak (f(t))
- [Peer Instruction](#) by Doug Smith (The Physics of Learning)
- [What Puts the Pseudo in Pseudoteaching](#) by Derek Muller (guest post at Action-Reaction)

#### **Update Mar 16, 2011:**

- [Pseudoteaching and Teacher Development](#) by Brian Frank (guest post pulled from the comments at Action-Reaction)
- [Pseudoquestioning](#) by Grace Chen (educating grace)
- [#scichat I've been speaking gibberish #pseudoed](#) by Elizabeth (inveterate geek)
- [Lehranstalt oder Lernanstalt?](#) by Peter Monnerjahn (Der Bildungsbasar)

#### **Update Mar 17, 2011:**

- [Pseudoteaching](#) by Clark Quinn (Learnlets)
- [Khan Academy and the Effectiveness of Science Videos](#) by Derek Muller (guest video post at Action-Reaction)

#### **Update Mar 20, 2011:**

- [Being Pseudotaught](#) by Michael Rees (Education from the Student's Perspective)

#### **Update Mar 26, 2011:**

- [The Mrs. E Show Has Been Canceled Until Further Notice](#)  
by Terie Engelbrecht (Crazy Teaching)

#### **Update Mar 31, 2011:**

- [Pseudoteaching and TV-Learning](#) by Ed Hitchcock (Teach Science (.net))

#### **Update April 25, 2011:**

- [Pseudoteaching on the Guided Inquiry Front](#) by Brian Frank (Teach. Brian. Teach.)
- [Pseudoteaching & Lesson Planning](#) by Max Ray (The Max Ray Blog)
- [Chains of Reasoning: Static Electricity #2](#) by Joshua Gates (Newton's Minions)

Don't miss out on the conversation happening in the comments! Subscribe to the  [Aggregated Comment Feed](#)

for ALL pseudoteaching posts listed above (which includes this page as well). [Except for "The Mrs. E show" because I cannot find the comments feed for the post 😞 ]

**What is pseudoteaching?** This term was inspired by Dan Meyer's [pseudocontext](#), which sought to find examples of textbook problems that on the surface seemed to be about real world problems and situations, but actually were about make believe contexts that had little connection to the real world, other than the photographs that framed the problems. After reading many of Dan's pseudocontext posts, [John Burk](#) and I had the idea of **pseudoteaching** [PT] which we have defined as:

*Pseudoteaching is something you realize you're doing after you've attempted a lesson which from the outset looks like it should result in student learning, but upon further reflection, you realize that the very lesson itself was flawed and involved minimal learning.*

We hope that through discussion, we'll be able to clarify and refine this definition even further. The key idea of pseudoteaching is that it **looks like good teaching**. In class, students **feel like they are learning**, and any observer who saw a teacher in the middle of pseudoteaching would feel like he's **watching a great lesson**. The only problem is, **very little learning is taking place**. We hope **pseudoteaching** will become a valuable lens for critically examining our own teaching, and that the idea will spread to other teachers as well. We'd love for you to contribute your own examples of pseudoteaching. Just email me a link to your pseudoteaching post and I'll add it to the list here. Thanks!

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## 44 RESPONSES TO PSEUDOTEACHING

[Mylene](#) | [February 21, 2011 at 11:57 am](#) | [Reply](#)



Interesting analogy. In [Dan M.'s original reference](#) to Jo Boaler's term "pseudocontext," Boaler defines pseudocontext as one "that students were meant to believe but for which they should not use any of their real-world knowledge... [indeed, if they] use their real-world knowledge, they will fail." So pseudoteaching would be teaching that intends to improve real skills, but if you try to use those real skills, you will fail? Dan goes on to say that pseudocontext causes "students and teachers [to become] alienated from mathematics." Does pseudoteaching cause students and teachers to become alienated from learning? I would suggest that, because it deceptively hides its failure (unlike bad teaching, which doesn't fool anyone), pseudoteaching's danger is not that students fail to learn. It is that we distort our sense of whether we've learned (or taught) well.

In the same vein, can I nominate "reading over your notes" for the label "pseudostudying"?

Pingback: [dy/dan » Blog Archive » Pseudoteaching: What Was Complex Becomes Routine](#)

Pingback: [Pseudoteaching with Demos « Teaching as a dynamic activity](#)

Pingback: [\[PT\] Pseudoteaching: MIT Physics | Action-Reaction](#)

Pingback: [\[PT\] Pseudoteaching: Hunting Monkeys « Quantum Progress](#)

[quantumprogress](#) | February 21, 2011 at 5:08 pm | [Reply](#)

Mylene,

These are some awesome insights. I think you are right. Pseudoteaching's main problem is that it looks like good teaching. I think most observers, including department chairs and principals would come out of a PT class with nothing but praise (and the students in the class would often feel the same way). So this puts the impetus on the individual teacher to recognize moments of pseudoteaching, and make corrections. Hopefully, by sharing stories of our own pseudoteaching, we can make this process a bit easier.

And I do think you are right, at least based on my own experience both as a teacher and a student, a major danger of pseudoteaching is that it makes you feel like you've learned some real skills, but, at the same time, sets you up to fail when you try to apply those skills.



[Mylene](#) | February 21, 2011 at 6:55 pm | [Reply](#)

\*nod\* I think it's harder to try again when you fail at something you think you're good at, than when you fail at something you know you don't know. Sure, we should train ourselves to recognize pseudoteaching. What if the students could recognize it too? (Or can they already?)



Pingback: [Tweets that mention Pseudoteaching | Action-Reaction -- Topsy.com](#)

[quantumprogress](#) | February 21, 2011 at 10:18 pm | [Reply](#)

Can students recognize pseudoteaching? That's a great question. I think it depends. If they're stuck in pseudolearning, my guess is probably not. Example: if they're learning AP bio is nothing more than memorizing vocabulary and short answers, then they probably see PT has a great way to "learn."



[Frank Noschese](#) | February 28, 2011 at 10:50 am | [Reply](#)

And then when they get to my physics class, and they have to apply and think, conflict happens....



Pingback: [\[PT\] Pseudoteaching FAQ « Quantum Progress](#)

[Dave](#) | February 22, 2011 at 2:27 pm | [Reply](#)

Students probably see pseudoteaching as a failure on their own part, which is really tragic.

Imagine it from the students' perspective: You feel like you're learning, the teacher is showing examples and you're answering questions correctly. Then you get to a point where you have to apply the new knowledge and it's just not there in your mind for you to use.



I'd say the typical reaction would be for the students to blame themselves. After all, the teacher 'clearly' walked them through all the steps, they were answering questions in class; they assume it must be some fault of their own brain.

[Frank Noschese](#) | [February 28, 2011 at 10:49 am](#) | [Reply](#)

Yes. And I think PT helps ingrain the "I'm no good at science" and "I'm just not a math person" attitudes we see in many students.



[Bryan Battaglia](#) | [February 22, 2011 at 10:54 pm](#) | [Reply](#)

I'm ashamed to say that I think I was a pseudoteacher for years. Is there a pseudoteachers anonymous I can join? Hi, my name is Bryan and I am a pseudoteacher.



[Frank Noschese](#) | [February 28, 2011 at 10:47 am](#) | [Reply](#)

You've taken a Modeling Workshop, and you've shared that with others to a packed room recently at MSTA. I'd say you're well on the road to recovery!



Pingback: [Pseudoteaching: A Tale of Two Teas](#)

[Maria Droujkova](#) | [February 23, 2011 at 7:24 pm](#) | [Reply](#)

This happened to us the other day in my math club, I think. I was doing an activity about Hotel Infinity – the part about infinitely many guests moving in. Kids had GREAT ideas the previous time. I wanted to model them and used some 20 egg cartoons in a row, with counters in them. That was so cumbersome that keeping the pattern of moving the counters around occupied all of the kids' attention and the beautiful discussions about infinity and multiplicative ideas they had the previous time were lost. I hope temporarily. But during the time it felt like we were doing something productive.



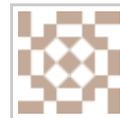
[Frank Noschese](#) | [February 28, 2011 at 10:46 am](#) | [Reply](#)

Great story. There's been plenty of times in lab where the focus has been too much on the equipment in order for the lab to "work" that the whole point of the lab was lost on the kids.



[RM](#) | [February 23, 2011 at 11:02 pm](#) | [Reply](#)

Great topic and great questions. I really like the thought of our students recognizing PT. Should part of education and teaching be to teach our students how to analyze and critique their superiors? This is a skill that is very important in life, but I do not think is taught in schools. Wouldn't this help make education better? Wouldn't this help make the work place better?



I think that for most teachers, myself included, it is difficult to get away from PT. It feels (and looks?) like you are not teaching. That you are doing something wrong, because your students are working harder than you (isn't that how it is supposed to be?).

However, I strongly suggest that you check out Sean Layne's work with Tableau <http://seanlayne.com/> Although his method does not lend itself easily to math, I have taken many of his ideas and applied them to conversation in math class. This would be a great step into getting away from PT.

**[Frank Noschese](#)** | [February 28, 2011 at 10:44 am](#) | [Reply](#)

Scroll down for the comment by PARR FOR THE COURSE. If only more students were able to recognize that! It's a valuable skill that allows students to be more in charge of their own learning.



**[Jane Jackson](#)** | [February 24, 2011 at 12:35 am](#) | [Reply](#)

Looks like good teaching, but isn't because you haven't learned anything; you can't apply it. That sounds familiar. Read David Hestenes' published paper on Malcolm Wells' teaching of high school physics in the 1980's; it includes much evidence, in the form of pre- and posttests of student achievement in understanding the force concept and in solving mechanics problems.



Wells, M, Hestenes, D, and Swackhamer, G (1995). A Modeling Method for High School Physics Instruction, American Journal of Physics 63, p. 609-619. Download it in pdf at <http://modeling.asu.edu/R&E/Research.html>

**[Frank Noschese](#)** | [February 28, 2011 at 10:41 am](#) | [Reply](#)

So true, Jane. Thanks for linking to the article. And important read!



**[PARR FOR THE COURSE](#)** | [February 26, 2011 at 11:20 pm](#) | [Reply](#)

I must share a clarifying experience. A few years back, after presenting a demonstration lesson in an interview, in which I used my wonderfully creative discovery-based teaching style, the lead administrator told me that she was surprised that I didn't actually teach the lesson, since I hadn't told the students anything. After trying to explain my approach, she simply dismissed my explanation and said it would take far too long to teach that way every day and that I would never get through the material. As I was leaving, still in shock, one of the female students came up to me and said that after listening to instructors all day long present routine lessons over and over, I was the only one who actually taught her something she never knew about equations and graphs. She appreciated working with fellow students, making inferences about relationships, simply questioning and thinking. She actually thanked me. Of course, I didn't get the job, but the memory of that student's comments have always stayed with me and reinforced what I've always known to be true, TEACHING ISN'T SIMPLY TELLING. Those of us who know this, need to work with others who know it as well. Great things happen when like minds come together.



By the way, students do know what real learning feels like, they just get tired of waiting around for it, so they tune out. Our educational system needs to stop focusing on memorization and parroting, and start demanding that we transform our classrooms into invigorating, investigative environments. Until we do this, teachers at all grade levels will continue to complain that their students come in without knowing what they were supposed to learn in the previous class. Real teaching is indeed a beautiful thing, inspiring and elevating both teacher and student to reach for more.

[Frank Noschese](#) | February 28, 2011 at 10:21 am | [Reply](#)



Powerful story! Thanks for sharing.

[Paul Hawking](#) | February 28, 2011 at 12:01 pm |



@Frank Noschese: I agree 100% and added this to “Pulled from the comments feeds (2-28-11)” on my blog.

Paul Hawking

Blog:

The Challenge of Teaching Math

Latest post:

What are you doing for Pi Day?

<http://challenge-of-teaching-math.blogspot.com/2011/02/what-are-you-doing-for-pi-day.html>

Pingback: [Pseudoteaching – Clayton’s learning? | Chemistry Chris](#)

Pingback: [The Science Learnification Weekly \(Feb 27, '11\) « Science Learnification](#)

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Pingback: [Math Stories : Pseudolearning](#)

Pingback: [Will you join our global physics department? « Quantum Progress](#)

Pingback: [What is Real Teaching? \(Part 1\) | Teach Science \(.net\)](#)

[Mylene](#) | March 26, 2011 at 8:00 pm | [Reply](#)



Just found this while looking for something else:

[Pseudo-teaching vs. Teaching Pupils To Learn](#), E. C. Cline, published in *The School Review*, Vol. 46, No. 4, April 1938.

Pingback: [TIL A New Word | Ed Stuck in the Cloud TIL A New Word | taking education to the cloud and setting it free](#)

Pingback: [Khan Academy: My Final Remarks | Action-Reaction](#)

Pingback: [A Touch of Dissent | Teach Science \(.net\)](#)

Pingback: [Killer App is a bad metaphor for historical trends, good for pseudoteaching | Metaphor Hacker - Hacking Metaphors, Frames and Other Ideas](#)

Pingback: [Constructivism versus Sal Khan #EdTech #K12 #Education #KhanAcademy | jackcwest](#)

Pingback: [Khan Academy Math Instruction | Videos 4 Good](#)

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