



The Future of Mathematics Professional Development

Ryan Timmons

Professional Learning Facilitator, K-12 Education Strategy, Policy, and Services

April 23, 2018, NCSM Annual Conference



About the Dana Center

— Equity — Access — Excellence —

2018



2

Dana Center by the Numbers



We supported **60,500 K–12 students** attending school on U.S. military bases through our work with the **Department of Defense Education Activity**.

Dana Center by the Numbers



We engaged with **118 districts in 23 states** to provide middle and high school math courses of the **highest quality** as recognized by rigorous state and national reviews, including EdReports.org.

Dana Center by the Numbers

At the close of 2017, the Dana Center has contributed to the **implementation of math pathways** in higher ed systems, institutions, and campuses in **29 states**.



Professional development: Evolution

- **Previous model**
 - Sit and get – transference of knowledge
 - The takeaway hook
 - Engaging speakers
 - Costly – time, \$\$ and other resources
 - Forced
 - Real, lasting learning and classroom impact?
- **Accepted despite the outcomes**
- **What changed?**
 - Teachers
 - Education leaders pushing for better

Development vs. learning

Development

- Vague
- Passive
- Individual
- Singular goal

Learning

- Common vision
- Action-based
- Collaborative
- Participatory
- Motivated
- Continuum

Professional learning: Future coming

- **Profound needs**
 - Ideals of how students learned – vision of learning
 - The teaching community
 - Expanded due to social networks**
 - Expectations of teachers
 - Changes to teacher practice
 - Real-time learning
- **Resources available**
 - Digital and online
 - Teacher-created
 - Technology
- **Change to speed of education**

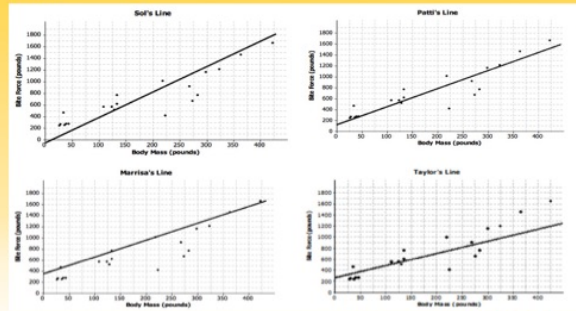
Learning activity or active learning

These four lines of fit were drawn onto scatter plots of the same data. Which one(s) are the best models for the data? Support your ideas



Brought to you by
The Charles A. Dana Center
At The University of Texas at Austin

2016oct26 Image Credit: Aquar / iStock / Thinkstock



<http://www.utdanacenter.org/>

Module 6: Linear Functions

The University of Texas at Austin
Charles A. Dana Center

9

Learning online

- **Social (expanded) networks**
 - Teacher-driven
- **Professional learning providers are catching up.**
 - Not! Webinar
 - Same model as before; not a shift in learning ideals
 - Addressing the challenges of the old PD model
 - Time, opportunity, access,* resources, transferability, implementation, timeliness
- **Bandwagon is filling but...**
 - Learning online and socially are different.

The University of Texas at Austin
Charles A. Dana Center

10

Our experiences

- **Dana Center projects**
 - Open Online Professional Learning (oPL) sessions
 - Mixed groups
 - Campus teams
 - System teams – training trainers
 - Large, worldwide, multi-year project
 - Connecting teachers and education initiative
 - Asynchronous and synchronous experiences
 - Colleges and universities
 - Connecting remote schools

Learner's experiences

- **Excited teachers**
 - **Want more**
 - **Convenient**
 - **Motivating**
 - Learn more
 - Implement
 - Contribute
 - **Expanding network**
 - **Pass it along!**
- “This was the best online learning session I have ever participated in/viewed. This was far superior to Blackboard discussions and traditional (limited interaction) webinars.”
- “I thought it was great. It blew my mind to be collaborating with people from other states/programs.”
- “The virtual breakout sessions were extremely effective. These breakouts were opportunities to discuss ideas and content at a deeper level than in a large group. It was almost like we were modeling the discussion protocol we would use during face-to-face classroom instruction.”

Learner's experiences

“I really like this as I have always wanted to attend a Dana Center session but it is difficult as I teach in the U.K. This was a fantastic opportunity to remove the physical distance and travel cost barrier to connect with other professionals and content.”

District's experiences

- **Desire to implement**
- **A little overwhelmed**
- **See the potential**
- **Staffing for facilitators***
- **Costs for scaling**

What we have learned

- **Interest is VERY high from teachers.**
- **Leadership is more hesitant but interested.**
- **Very scalable – facilitators training**
 - Co-constructed learning
- **Similar upfront development costs but actual facilitation is far more affordable.**

Challenges

- **Remaining connection to old ideals and models of Professional Development**
- **Upfront development**
- **Short session times**
- **Session timing**

What comes next

- **Shift in perspective of oPL**
- **Dedication of money for development**
- **Real – sustainable teacher buy-in**
- **Connecting education credits with learning sessions**
- **More research into impact**
- **Designing similar learning for students**

Contact information

Ryan Timmons

Email: rtimmons@austin.utexas.edu

Phone: (214) 578-7333

Visit the Dana Center at utdanacenter.org.

Find us on Facebook at facebook.com/utdanacenter or on Twitter at [@UTDanaCenter](https://twitter.com/UTDanaCenter).