

Moving from Business Education to Computer Science Concepts in the Middle Grades

Patty Hicks
Still Middle School
Aurora, IL

I don't know computer science.

I don't know computer science.
I won't learn computer science.

I don't know computer science.

I won't learn computer science.

I will never teach computer science.

I don't know computer science.
I won't learn computer science.
I will never teach computer science.

That was the response from a middle school computer applications teacher after I asked that computer science enrichment be added to the curriculum.

The Federal Government can promote CS4All.

The Federal Government can promote CS4All.

States can require endorsements in Computer Science.

The Federal Government can promote CS4All.

States can require endorsements in Computer Science.

Colleges & Universities can offer pathways to the endorsement.

The Federal Government can promote CS4All.

States can require endorsements in Computer Science.

Colleges & Universities can offer pathways to the endorsement.

K12 School Districts can add computer science to the curriculum.

The Federal Government can promote CS4All.

States can require endorsements in Computer Science.

Colleges & Universities can offer pathways to the endorsement.

K12 School Districts can add computer science to the curriculum.

But how do you change the hearts/minds of the teachers?

In 2013 we offered a new elective called *Tech Revolution:*
Algorithms, Conditionals, Loops, Variables
Mobile apps- gaming-websites
(App Inventor-Scratch-HTML)

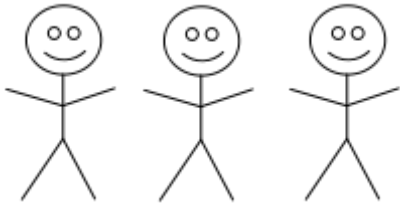
Enrollment is up 25%.

More 8th graders are taking AP CS and coding in high school.

Now we have after school coding clubs in middle and high school.

How did the teachers react?

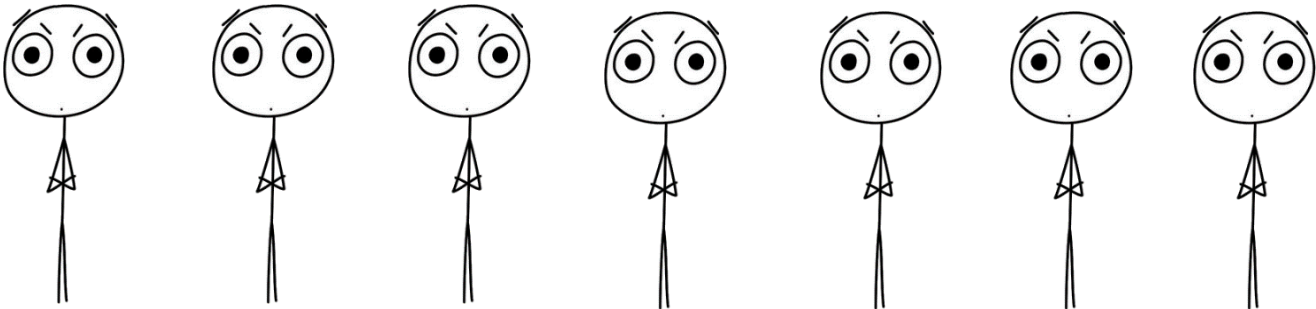
Can't wait to teach this class!



Excited but nervous. I'll need some help.



We shouldn't be teaching this. I don't want to teach it.



Why didn't the teachers want to teach coding?

Why didn't the teachers want to teach coding?

At first I thought it was a lack of knowledge or confidence
in coding and CS concepts.

Why didn't the teachers want to teach coding?

At first I thought it was a lack of knowledge or confidence
in coding and CS concepts.

But their attitudes didn't change,
even after professional development and time teaching.

Why didn't the teachers want to teach coding?

Then I thought it was a lack of knowledge in the importance of software development as a way of learning how to solve problems or how to change the world with code.

Why didn't the teachers want to teach coding?

Then I thought it was a lack of knowledge in the importance of software development as a way of learning how to solve problems or how to change the world with code.

But their attitudes didn't change, even after reading current research on all the benefits of teaching kids how to code.

How do you change a mindset?

“73% of high school girls who had a teacher who inspired them said they were interested in studying computing, compared to only 26% of those who had a less inspiring teacher.”

Accenture & Girls Who Code Research Study

How do you inspire a teacher?