Achieving Sustainable and Systemic Change in K-12

Chris Stephenson

CSTA
Computer Science Teachers Association
The Importance of Change Leadership

• Leaders in education need to create, not just a structure for change, but a culture in which new ideas and practices are critically assessed and selectively incorporated on a continual basis.

• Change leaders/agents will inevitably encounter resistance:

  To lead is to live dangerously because when leadership counts, when you lead people through difficult change, you challenge what people hold dear—their daily habits, tools, loyalties and ways of thinking.... People push back when you disturb the personal and institutional equilibrium they know. People resist in all kinds of creative and unexpected ways. (Heifetz & Linsky, 2004)
The Broad Context
Key Areas of Change Engagement

• The educational environment (systemic issues)
• The policy environment (political issues)
• The decision-making environment (power issues)
• Terminology (discipline Issues)
• Teachers (classroom issues)
The Nature of the Educational System

• Public education is a huge, complex bureaucracy where competing
  — ideologies,
  — philosophies,
  — ontologies, and
  — pedagogies
  vie for attention and dominance

• It is subject to extreme pressure from within and without

• It is simultaneously valued (professionalized) and devalued (deprofessionalized)

• Its employees are overworked, underpaid, and severely under-resourced
Complex Policy Environment

- More than 14,000 school districts
- More than 97,000 secondary and elementary schools
- 50 governors (plus D.C. and territories)
- 50 Chief State School Officers
- Federal Policy makers:
  - House and Senate Educational Committees
  - House and Senate Science Committees
  - Various Federal Agencies (Department of Education and National Science Foundation)
  - Diversity of Federal laws governing education
- Numerous private education organizations with differing missions and agendas
Decentralized Decision-Making

The decision-making authority for publicly funded schools in the U.S. is exceedingly complex, but it is safe to generalize in the following ways:

• Decisions regarding the distribution of federal funding are made at the federal (national) level but these primarily affect low-income urban schools

• Most of the funding for schools is determined locally, so the quality of individual schools varies enormously based on the wealth of the school community

• Decisions regarding teacher qualifications and teacher certification are made at the state level, and the rules differ markedly from state to state

• Decisions about curriculum are made at the local level (there are no national curriculum standards for any academic discipline). So what students learn varies enormously from school to school and even from classroom to classroom
State Level Issues

• The lack of a standardized curriculum means there is no consistency in what students are learning

• Teacher certification standards in computing are a mess

• Pre-service teacher education programs have no incentive to prepare teachers to teach computational thinking

• Professional development for current teachers is woefully under-serviced and under-resourced (haphazard, one-shot, irrelevant)
The Terminology Tangle

• Introducing the term “computational thinking” in K-12 adds to the confusion about the differences between and interplay among:
  - Computer science
  - Computer literacy
  - Computer fluency
  - Educational technology
  - Computing across the curriculum
  - Algorithmic thinking
  - Problem solving
Practitioner Realities

- It is hard to find reliable channels for direct-to-practitioner communications
- Teachers need proof that there is a need to change
- Teachers often lack access to resources that will support change
- Teachers often lack access to professional development that will show them how to change
- Teachers often lack access to a learning community that will support their change efforts
- Teachers lack sustained access to experts who can provide feedback on their change efforts
- There is just so much “noise” out there right now
Making Change Happen
Ready, Willing, and Able

Capability
(able)

Focus
(ready)

Will
(willing)

Watkins and Marsick, 1993
Factors in Educational Change

• Most of the changes that occur within education are the result of small-scale, bottom-up innovation within individual schools

• Systemic change requires three critical processes:
  – Convergence of resources (often people) that provide a starting point for change
  – Mutual benefit to those affected by change
  – Sufficient resources and expertise to sustain change
Change Agents

• A change agent is

A professional whose major function is to advocate for change and to put innovative practices in place within the organization.

(Carlson, 1965)

• Systemic change also demands profound engagement with and understanding of the educational culture. Effective change agents must therefore:

Understand how to balance pushing for change while at the same time protecting aspects of culture, values, and norms worth preserving...know how and when to create learning environments that support people, connect them with one-another, and provide knowledge, skills, and resources they need to succeed. (Waters, Marzano, & McNulty, 2003)
Who Are the Primary Stakeholders?

- Teachers
- Principals
- School District Policy Makers
- State Government Policy Makers
- University and College Faculty
- Federal Government Policy Makers
- Business and Industry
Stakeholder ROIs

• Teachers:
  - To do a good job and meet the learning needs of their students
  - To grow as people and professionals
  - To be appreciated for the work they do

• Principals
  - To meet the learning needs of their students
  - To allocate their funds for the highest possible return
  - To be perceived by parents and the community as doing a good job

• School District Policy Makers
  - To meet the learning needs of their students
  - To allocate their funds for the highest possible return
  - To be perceived by parents and the community as doing a good job
Stakeholder ROIs continued

- **State Government Policy Makers**
  - To meet the learning needs of their students
  - To allocate their funds for the highest possible return
  - To ensure that teachers are adequately trained
  - To satisfy the community and meet the skills needs of local industry

- **University and College Faculty**
  - To get enough students into their programs
  - To have students come into their programs ready and able to succeed

- **Federal Government Policy Makers**
  - To allocate their funds for the highest possible return
  - To be perceived by voters as doing a good job
  - To ensure that the country remains economically stable and strong

- **Business and industry**
  - To make a profit by providing what people want
  - To have the workers they need to do the job
There are Always Trade-offs

- Localization vs. scalability
- Immediate impact vs. sustained change
- Changing standards vs. changing practice
- Changing practice vs. changing thinking
Maintaining Momentum

- Two steps forward and one step back
- Shifting priorities
- Disappearing funding
- Diminishing returns on investment
- Innovator burn-out
- The next “big thing”
- No good deed goes unpunished
But…

• No one said change was easy….

• If it is worth doing, it is worth doing even if it is hard…

• Barriers are just incentives in disguise….

• Each one of you has probably achieved something incredible….
So…

- We have to be realistic about the challenges we face, but our efforts cannot be defined by those challenges.

- We have to focus on the problems we must solve and on the elements that we can solve now (because we cannot fix everything all at once).

- This room is full of solutions. We have to share the ones we already know about and bring them to this project.
Stop talking Now!
Strategies for Bringing About Systemic Change in K-12

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Key Areas of Change Engagement

• The educational environment (systemic issues)
• The policy environment (political issues)
• The decision-making environment (power issues)
• Terminology (discipline Issues)
• Teachers (classroom issues)
Potential Engagement Areas

• Changing the educational environment
• Convincing policy makers that CT must be part of every student’s education
• Fixing the terminology tangle
• Reaching and communicating with teachers
• Inspiring teachers to change
• Providing resources to support change
• Providing professional development
• Building a learning community for ongoing support

OKAY, PICK THE TOP 5!
Elements of a Good Strategy

- Is realistic and achievable
- Has been tried before successfully somewhere
- Addresses the ROIs for as many critical stakeholders as possible
- Can be clearly defined
- Has a measurable end goal
- Is both logical and elegant
- Will not take forever
- Will not cost a fortune
- Will create new or support existing partnerships
Group Assignment

• For each of the five engagement areas we have identified:
  — Come up with as many strategies as you can in 30 minutes
  — Write each solution on the post-it notes on your table (make it readable and sign someone’s name so we can ask questions if we need to)
  — At the end of the 30 minutes post your individual solutions for each engagement area on the appropriate post-it poster
  — Before you post a solution, read the ones already posted so you do not post a duplicate idea

• We will collect all the suggestions and report back to the group.