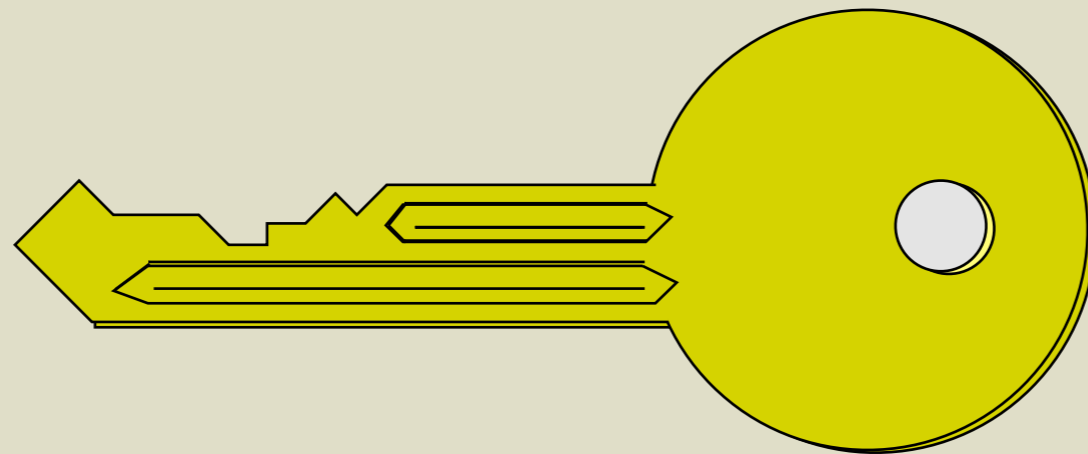


# Teacher Collaboration

A key to improving math instruction



Henri Picciotto  
The Urban School of San Francisco

[MathEducation.page](#)



# The Urban School Math Department

25 years ago...

No coherence in our math program

# 20 years ago...

- ◇ Occasional departmental discussions
- ◇ Embryonic “philosophy”
- ◇ Student cooperative learning model
- ◇ Interest in using technology

# 15 years ago...

- ◇ Starting to develop our own materials
- ◇ Letting go of the textbook in one class
- ◇ Much increased collaboration
- ◇ Great morale

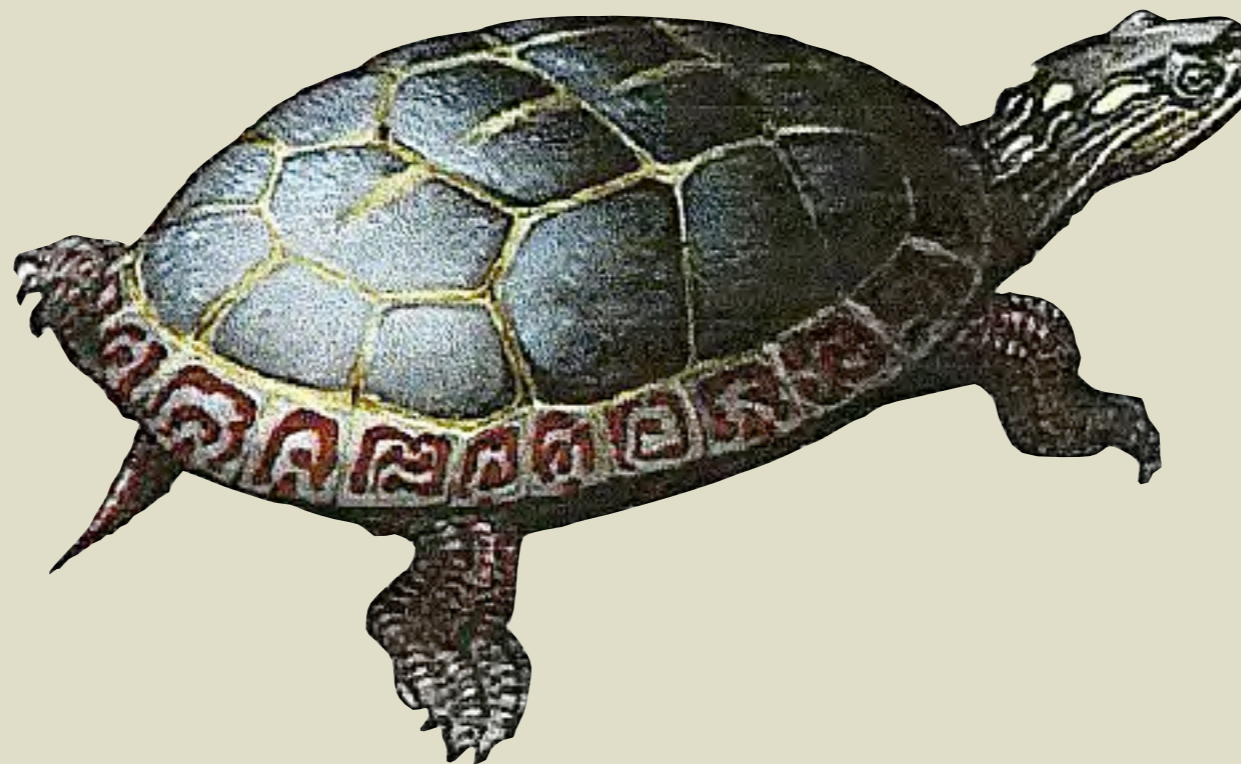
# 10 years ago...

- ◇ Collaboration systematized
- ◇ Other departments follow our example

# 5 years ago...

- ◇ Schedule changes, in part to accommodate teacher collaboration
- ◇ Collaboration is now expected of all teachers in all departments
- ◇ Hiring has been affected

Slow is fast,  
and fast is slow!





# Teacher Collaboration

## Professional Development from the Inside

Jonathan Howland

Henri Picciotto

The Urban School of San Francisco

# Teacher Collaboration

## An Archetype

Rationale

Theory

Practice

Benefits

Challenges

Implications

An Alternate Archetype

# Meet the Abits

- Expertise  
They know the subject with uncommon depth
- Experience  
They teach with consummate skill
- “Master Teacher” reputation  
Mythical stature  
Admired, revered, feared

# Autonomous

- Granted implicit license to negotiate their own way
- They may rock the boat, but not much — it's working for them

# Idiosyncratic

- Quirky, legendary
- Find working with adults (meetings, including collaborating with others) subsidiary to the real work of teaching

# The Autonomous, Brilliant, Idiosyncratic Teacher ...

- A terrific asset to the school
- A powerful archetype
- A standard against which teachers, as well as prospective teachers, are measured

Say your faculty is all Abits.

What do you lack?

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# Pedagogical Self-Consciousness

Because they depend on intuition, reflex, and experience --attributes of a “natural teacher”-- the Abits’ techniques are often incommunicable.

They may not even understand the sources of their effectiveness.

# Programmatic Coherence

The Abits' fierce independence thwarts programmatic coherence.

They do not readily contribute to the development of a department's memory and archives.

# Substantive Involvement with Colleagues

The Abits' practices and stature exclude them from the kind of reflection and revision that is awakened and supported by working with other adults.

A faculty composed of Abits  
provides no mechanism  
for even a very good department  
to improve and adapt.

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# Collaboration is concerned with teaching and learning

- Content
- Lesson plans
- Learning activities
- Assessments
- Curriculum design
- Evaluation and revision of program

# Collaboration addresses any and all pedagogical and curricular issues

- It is designed to support ordinarily configured classroom teaching
- It is particularly important for the core classes (algebra, geometry) as those
  - are foundational
  - should express the program's principal aims
  - involve the most students, for the most time
  - yield the biggest impact

# Collaboration supports the professional growth of the participants

- Provides opportunities to express doubts and concerns
- Allows a teacher to compensate for weaknesses and share strengths
- Expands a teacher's range and repertoire



# Collaboration strengthens departmental programs

- Problems, missed opportunities, and alternate strategies are openly explored
- Expanded proprietorship of the program for each of its members
- Greater coherence

# Teacher collaboration ultimately benefits the student

- It may address the needs of specific types of learners
- However, it is not focused on the needs of individual students

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# Various Configurations

All of them consisting of teachers  
working in small teams

# 1. Same class, different sections

- Weekly meetings
- Frequent informal exchanges
- E-mail conference

## 2. Mentoring

Collaboration between an experienced teacher who is or is not teaching a course, and less experienced teachers who are.

# 3. Different Courses / Grades

- More difficult
- Less-than-weekly meetings
- Requires more thoughtful leadership and planning

## 4. Summer Work

- Concentrated endeavor, three days to two weeks
- Paid (ideally!)
- Curriculum design and redesign (prioritize!)
- Overall articulation of the program
- Documentation of the curriculum  
(Big picture to actual worksheets)



## 5. Presentations at Professional Conferences

- To share the fruits of the day-to-day collaboration with the broader education community
- To articulate what is often implicit in our teaching

# Leadership

- Veteran teacher and/or mentor collaborates with a less experienced colleague
- In a collaboration of peers, who leads depends on overall availability and workload
- The main responsibilities of the leader are to
  - map out the week
  - keep a record of what actually happens
  - make notes of needed changes

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# Challenge and Renewal

- One does learn from experience, but unexamined experience can be of limited value
- Teachers cannot learn all they need to know about their practice from interactions with students

# A Strong Program Gets Better

- Good ideas spread to other classes and teachers

(In the absence of collaboration, many good ideas leave the school with their originator)

- “Philosophy” is discussed in the context of the actual work we do

# Course Corrections

- Collaboration facilitates necessary curricular change, and the archiving and refining of good material.
- Flaws in the program are more likely to be challenged
- Nuances, details, and subtleties are attended to

# Effective Mentoring

- Younger teachers learn the tools of the trade
- Over time, they are offered a richer menu of models than in the standard one-mentor approach

On a more practical level, collaboration helps reduce the beginner's workload.

# Mentoring — other effects

- Veterans gain energy and new ideas from their work with less experienced colleagues
- New teachers learn that even experienced teachers face challenges and difficulties in the reality of the classroom
- In the collaboration, they are trusted and respected as peers, an invaluable boost to their confidence



# Faculty Bonding

- Collaboration meetings address the everyday needs of teachers
- There is no better way to build esprit de corps
- This solidarity pays off in enthusiasm and commitment to the program

# Student Learning

Of course, a stronger program and stronger teachers improve student learning!

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# Obstacles

- Teacher collaboration requires a change in outlook, not merely a change in policy
- Scheduling and time issues

# Points of Tension

- Generalist v. specialist
- Managing differences: expectations, levels of experience
- Vulnerable egos
- Does a course “belong” to its teacher or to the department?

# The Teacher's Voice

Is collaboration homogenizing?

- Idiosyncrasy remains important — celebrate teacher quirkiness within common enterprise
- This is not unlike what we expect of students: strive for common goals, but strive distinctly

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This approach calls for and facilitates the practice of having all teachers working in the core curriculum -- Algebra 1, Geometry, Algebra 2, or their equivalent.

(This may conflict with established habits, structures and expectations.)



# Musical Chairs

- Content expertise and pedagogical savvy are assets
- But the feudal order is a liability
- A solution:
  - Experienced faculty share teaching the core
  - Less experienced faculty grow into more advanced courses

# Administrative Sanction and Support

- Validation, encouragement
- Time and schedule
- Trading some instructional time for collaboration time can yield a net gain

# Department Chair as “Citizen-Administrator”

- Change comes by persuasion rather than by fiat
- Failing to persuade, accept defeat and try something else!

# Collaboration vs. Evaluation

- Both are vehicles for teacher professional growth
  - Evaluation happens once every few years
  - Collaboration happens every day
- Conflicting roles: evaluator and colleague
  - Evaluation must honor and assess the teacher as collaborator

# Hiring

- A new standard: eagerness and viability as a collaborating colleague
- This expectation shapes but also limits the possibilities (in both hiring and retention)
- Training talented, compatible people without extensive experience may work better than hiring Abits and attempting to convert them

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# An alternate archetype: today's great teacher

- Has frequent, structured interchanges with colleagues
- Shapes the program not by archetypal force and reputation, but by design
- Mentors newer teachers
- Builds the archives—records and revises the music

A strong faculty accepts that the richest learning is occasioned not only by their intuition, expertise, and charisma but also by the design, reflection, and revision facilitated by teacher collaboration.



With their colleagues, the Abits become students not just of their disciplines, but also of their practices in teaching young people.

*Independent School Magazine*, Spring '03  
“Into the Province of Shared Endeavor”  
(article available at [www.picciotto.org/math-ed](http://www.picciotto.org/math-ed))

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# Teacher Collaboration

Professional Development ~~from the Inside~~  
with the Outside

◇ The Web

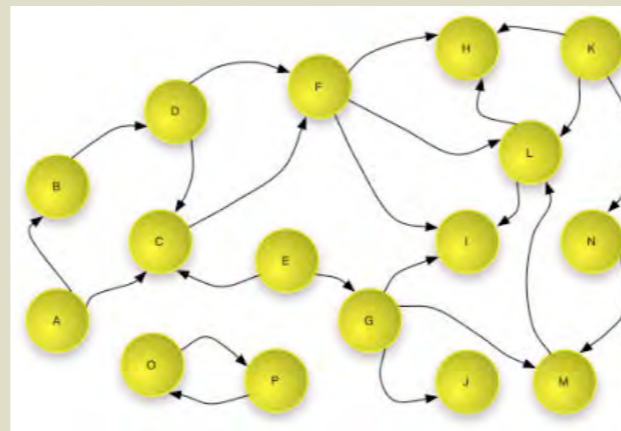
◇ E-Mail



# Conferences



# Other Schools



**Sage Moore**  
Skyline High School  
Oakland USD

# Context

## My School

- Large urban public school in Oakland
- Program Year Improvement 4
- 1 year provisional accreditation (WASC)
- 14 math teachers

## Me

- 4th year teaching
- 2nd year as department co-chair
- Previous career in Information Technology



# Challenges

## **Opportunity**

- Not enough time
- Not enough \$\$ or perceived value both by administration and teachers to make/buy the time

## **Models/Repertoire**

- Most teachers have no experience or direct knowledge of models/structures for successful teacher collaboration
- Most teachers have a limited repertoire of teaching and instructional strategies

## **Curiosity**

- Many teachers appear to lack curiosity around student learning and student thinking

## **History**

- Teachers have been continually "done to"
- Administration changes very frequently
- What they current do works well enough, or so it seems.

# Success

## **Opportunity**

- Threat of loss of accreditation. WASC self-study provides an opportunity to build reflective practices
- PI4 -- fear of reconstitution provides opportunity for change
- New schoolwide PD schedule provides some time (although not enough)

## **Curiosity**

- New teachers bring interest and enthusiasm.

## **Models**

- PLC model, although not well understood, provides a model for teacher collaboration

# What has worked (for me) so far

**Collaborating around one course** -- just two people. We were eventually paid and then two other teachers joined the group. We had the only CST math test score increase last year

**Mentoring new teachers.** Develops rapport, help them build their professional identity, help them be reflective.

**Taking on opportunities for leadership**, even if it means more work. Department chair, WASC self-study committee, etc.

**Being proactive.** Using change as opportunity. Researching models and defining structures before they are done to us.

**Keeping hopeful.** Talking to like-minded people. Asking for advice from trusted colleagues. Avoiding those that sabotage.

# Henri Picciotto

The Urban School of San Francisco  
Center for Innovative Teaching

*Summer workshops*

Visual Algebra: Aug 4-7

No Limits: Aug 10-11

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