

## Going 1:1 is a Full-School Change

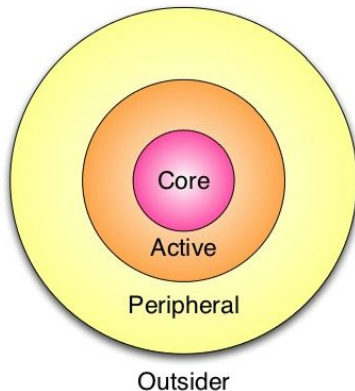
“It is one thing to create change inside a classroom -- the best teachers, masters of their one-room domains, break from tradition and foster innovative learning environments all the time. A harder task, which a growing number of schools are proving can be done, is to convert an entire school to embrace new practices that fulfill the changing educational demands of our age.” ([Edutopia](#))

As 1:1 configurations are full school (or multi-grade) changes, all core content area teachers (and intervention teachers) must participate. When changes in practice are made only by some, the process stalls, creating a “1:1 Plateau”. Contributing failures to 1:1 Plateau include:

1. Not enlisting all teachers in the choice to go 1:1.
2. Not sharing expectations for 1:1 adoption with teachers.
3. Expecting innovations by early tech-adopting teachers to trickle down to others.

## Communities of Practice

While trickle-down failure can be helped by training tech-savvy teachers to coach willing peers, unwillingness to be coached may be a function of the organizational culture around the 1:1 move. Schools often go 1:1 without first getting teacher buy-in, which can doom the initiative according to Project RED. Teachers that reject top-down practice changes are also likely resist being nudged into them by peers, avoiding technology professional development sessions and coaching appointments. The equation needs a new variable.



A complementary, informal approach to the supports of coaches and technology professional development sessions is the bottom-up cultivation of a “Community of Practice” (Wenger and Lave, 1991) of teachers sharing knowledge, building resources, and defining best practice together.

The image at left shows a Community of Practice (CoP)’s levels of investment. The Core team may include integration specialists, coaches, innovators, and early adopters of technology (Rogers, 1962). The Active team are those who regularly attending tech PD sessions and apply new tools and techniques to their lessons. Peripheral teachers consider the change and taking small steps, but not yet engaging with shared community resources.

Going 1:1 is a powerful context and opportunity for developing a practice community, but presents an overwhelming avenue of detail-rich topics and issues that arise quite suddenly and require immediate attention. One challenge to forming a coherent faculty CoP is identifying topics for teachers to explore as a group while limiting the focus and scope of topics to facilitate participation by teachers at various levels. For example, when technical questions about device support and wireless networking are handled well by technical support staff, teachers do not need to add these new knowledge domains to their wheelhouses.

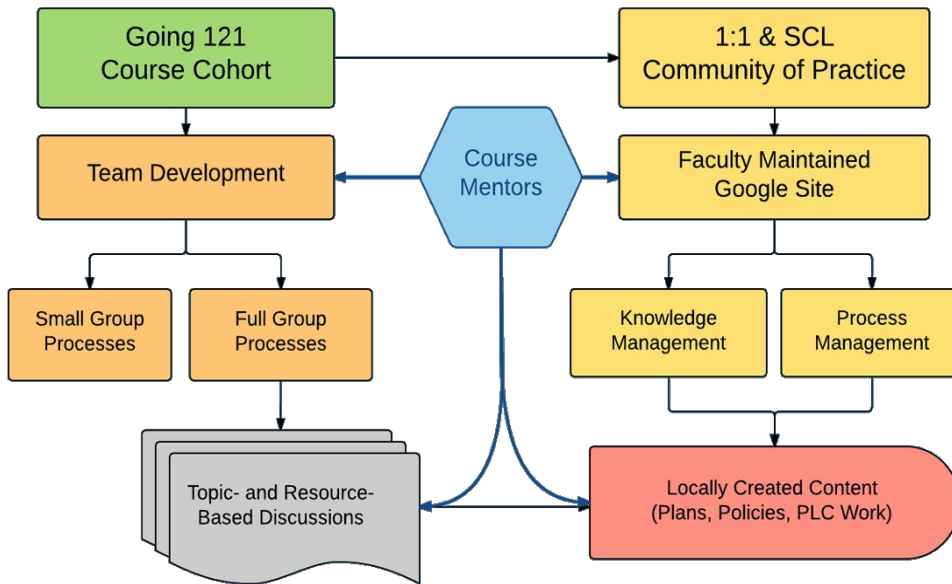
Setting aside technical questions, obvious 1:1 practice development choices for instruction include:

- **Building technical skills:** working with Google Apps, for which there are many online resources.
- **Modeling technology integration:** enhancing and transforming lessons for 1:1 classrooms.
- **Adopting Student-Centered Learning (SCL):** Project RED’s research shows 1:1 classrooms only have significant impacts on student achievement when Constructivist, student-centered pedagogy is present.

- **[Adopting classroom management and discipline protocols:** where teachers do not engage students with SCL, new devices provide many new ways to go off task.]

Communities of Practice, unlike PLCs (below), are informal, voluntary, and self-organizing. They cannot be imposed from above, but they can be cultivated.

## Going121's CoP Cultivation Strategy

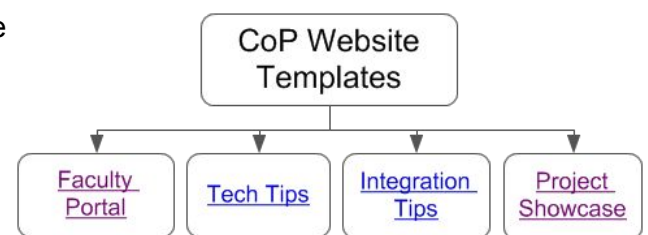


In its initial site survey, our change solution, Going121, identifies current activities and resources related to each of the four CoP domains: collaboration, information sharing, group activities, and knowledge management. Where these are already in place, they are referenced in course activities and documentation. In their various roles supporting the formal course and informal mentor relationships, Course Mentors are encouraged to give additional support and articulation to support these four CoP domains, and make connections between them and the

activities and resources of the course.

For example, if teachers are sharing technology integration lessons and stories, course mentors will refer to them in online course discussions. If Google Hangouts are found to be effective ways to troubleshoot online participation, they may also serve for shared lesson planning for co-teaching.

Google Site websites can be used by Course Mentors (the Core group behind Going121) to build a knowledge base and showcase model work. This site map shows four Google Site templates created for the purpose. The Faculty Portal links to the other three, each ideally curated by a few core participants but contributed to and accessed by many others.



Going121's course and eLearning activities are designed to serve as a growth framework for CoP domains, initiating or reinforcing patterns and practices that can sustain innovation and collaboration after, particularly those that make use of the same Google Apps tools that teachers are mastering for their classes. The next page lists some examples, organized by each of the four domains.

### Informal Collaboration

- **During Course:** Teachers learn to use Docs, Groups and Hangouts together for collaborative tasks.  
**After Course:** Grade level teams continue to apply course patterns for Docs, Groups and Hangouts.
- **During Course:** Mentors serve in tech support and integration support roles.  
**After Course:** Mentors continue to serve as integration coaches.

- **During Course:** Teachers use Quad Peer Review to refine 1:1 lessons and materials.  
**After Course:** Co-Teachers continue to apply peer review patterns to create lessons.

### Shared Knowledge

- **During Course:** Teachers share materials as course assignments via ePortfolio Blogs.  
**After Course:** Teachers reference their own and peer ePortfolio and Blog posts as examples
- **During Course:** Google Hangouts are used for course check-ins and to discuss integration models.  
**After Course:** Teachers offer to showcase successes for peers in Hangouts-On-Air, also building professional portfolios for licensure.

### Group Activities

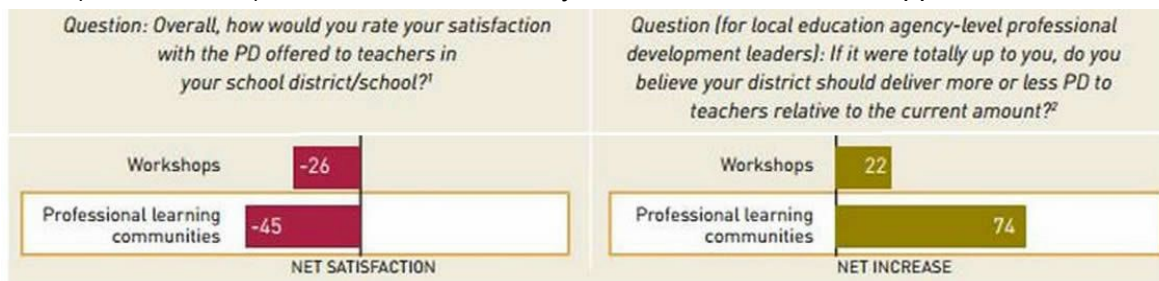
- **During Course:** Readings and tasks share and reinforce strategies for teaching with technology.  
**After Course:** Teachers initiate topics for Google Group discussion, many others join in.
- **During Course:** Mentors take responsibility for supporting technology professional development.  
**After Course:** Mentors continue to organize professional development for conference days.

### Shared Knowledge Management

- **During Course:** Mentors organize CoP Google Site to highlight teacher blog posts model lessons.  
**After Course:** Teachers continue to reference CoP Site, and share blog posts and lessons there.
- **During Course:** Mentors consolidate information sources and repositories into one Google Site.  
**After Course:** Google Site remains a portal to shared references and ongoing process documents.

## CoPs versus PLCs

A recent [Gates Foundation survey](#) showed that while administrators favor Professional Learning Community (PLC) solutions (Dufour, 2003) to build effective faculty collaboration, teachers oppose them:



This disparity is probably because PLCs are mandatory, highly involved professional development packages, while CoPs are voluntary, organic processes that grow in response to individual involvement and need.

- In a standard PLC (the DuFour model), teachers are tasked to execute actions based on SMART goals: make improvements based on defined school goals and strategies and demonstrate the success of improvements with evidence of student achievement. Participation is required and supervised.
- In a Community of Practice (Wenger), stakeholders (e.g. teachers and students) choose to share experiences, and recommendations to help each other perform better, and decide how do this in efficient and sustainable ways. Sharing is voluntary, reflective and vulnerable.

Because 1:1 adoptions are time-sensitive, the more tightly-coupled approach of a PLC may suggest itself. However, as many aspects of the 1:1 student-centered change process are highly individualized and classroom-dependent, the PLC approach has limited utility. Also, the high level of coordinated commitment for a PLC process is unlikely to be available during the chaotic innovation period of early 1:1 adoption. The

following table details some these differences. CoPs are defined by their four domains of practice; corresponding domains from PLCs are placed alongside for comparison.

<u>Professional Learning Communities</u>	<u>Communities of Practice</u>
<p><b>Goal: Research and Improvement Cycle:</b> Teachers gather evidence of current levels of student learning, develop strategies to build on strengths and address weaknesses, implement strategies, analyze the impact of changes, and apply this knowledge to the next grading cycle.</p>	<p><b>Goal: Shared Knowledge Management:</b> Members share responsibility for managing the knowledge they need, linking learning and performance; addressing the tacit and dynamic aspects of knowledge creation and sharing; and connecting across organizational boundaries.</p>
<p><b>Method: Formal Collaboration:</b> Collaborative teaching teams work in a systematic process to interdependently achieve explicit common goals that impact their teaching practice.</p>	<p><b>Method: Informal Collaboration:</b> Members engage in joint activities and discussions to help each other and share information. They build relationships to help them learn from each other.</p>
<p><b>Communication: Directed Inquiry:</b> Teams work together to identify and implement best practices, and work individually to develop new skills and capabilities associated with these efforts.</p>	<p><b>Communication: Shared Knowledge:</b> Teachers develop a repertoire of resources, documenting and sharing experiences, stories, tools, and ways to address recurring problems.</p>
<p><b>Term: Time-Sensitive Action:</b> Collaboration occurs in a context of taking collective actions, often organized around SMART Goals, with high levels of group accountability for a defined term.</p>	<p><b>Term: Occasional Group Activities:</b> CoP members initiate calls for joint problem solving, comparing experiences, coordinating reflection on efforts, mapping knowledge, identifying gaps.</p>

## Cultural Change

CoPs are bottom-up, self-organizing approaches that arise (in schools) among teachers who see a need to pool resources and efforts to succeed in common changes. CoPs are unlikely to form in response to changes imposed from above. For example, Common Core State Standards are often implemented as result of legislation. Many materials and supports for CCSS adoption are of high production quality, developed by rich corporations, and convey a sense that the new practices have been thoroughly researched, developed and tested, and need only be applied by properly-trained teachers. Teachers do not often lend their own initiative under these conditions.

While the scope of change of a 1:1 adoption is similar in scale to a CCSS adoption, effective methods for managing that change are very different. CCSS adoption management resembles a “production roll-out” while 1:1 adoption requires local research and development. Innovative teams who focus on finding and discovering what works require latitude and resourcing.

However, public schools are traditionally bureaucratic, structured to support standardized performance. A Community of Practice may surface when principals signal a move to adopt a culture of innovation. The CoP’s core participants begin by sharing what local teachers and respected experts consider useful knowledge and effective models, inviting peers to apply these and contribute their own experiences. As peripheral teachers become ready to participate more deeply as 1:1 teachers, they may move more actively into the CoP, finding resources at the ready and making use of them, playing a necessary part in supporting and sustaining the efforts of the Core and Active participants.