

**Leavening the Dough:  
Growing Quality Teaching by Supporting CFG's**  
Presented by Donna Reid, Houston A+ Challenge  
National School Reform Faculty Research Forum  
January 11, 2006  
Denver, CO

One afternoon when my Aunt Gladys was a ten-year-old child, my grandmother told her to watch her four younger siblings and bake biscuits for dinner while my grandmother went out to tend the garden in the fields. Gladys carefully measured and mixed the flour, shortening, salt, and buttermilk; gently kneaded the dough; cut the biscuits; and placed them in the baking pan. Soon, Gladys realized that she had left out the leavening, so she tried to make amends by poking a pinch of baking powder into the center of each biscuit before placing them in the oven. Even now, almost seventy years later, Aunt Gladys remembers that those biscuits “were ugly and as hard as hockey pucks—but we were so poor that we had to eat them anyway.”

Any skilled baker knows that baking a tasty loaf of bread or a tender pan of biscuits is no simple task. A baker must be alert and make sensible choices about many variables such as the type and proportions of the ingredients; the sequence in which ingredients are combined; the time, temperature, and speed of kneading; the manner of baking; and, of course, the leavening.

When baking, leavening is any ingredient such as yeast, baking powder, eggs, or steam that makes dough rise. The *American Heritage Dictionary* also defines leavening as “an element or influence that works subtly to lighten or enliven a whole.” Current school reform efforts mix together a wide array of variable ingredients such as diverse stakeholders, teacher quality, parent choice, and accountability. But like Aunt Gladys’ biscuits, school reform efforts are destined to fall flat and be hard to swallow unless they include the leavening of collaboration, reflection, and a focus on student learning that can be found in Critical Friends Groups, also known as CFG’s. (Conzemius and O’Neill, 2001)

## **Building the Bakery**

The baking process often begins with a hunger for nourishing, delicious bread. Similarly, the school reform process begins with a hunger and desire for improved student achievement. In 1996, key individuals in Houston, Texas, expressed concern about the quality of public education in the greater Houston area and sought to develop an organization capable of initiating and nurturing systemic change. This organization, the Houston A+ Challenge (formerly the Houston Annenberg Challenge) acts as an expansive “bakery” for school reform in Houston.

“Houston Annenberg’s [now Houston A+’s] theory of action for school change places schools at the center of the reform. Annenberg assumes that those who work closely with children and know them best should decide on changes needed for the school. Annenberg also assumes that strong professional communities develop as educators review their own practices to strengthen student learning. Annenberg believes that community support is essential for sustaining school reform in the greater Houston area.” (Reyes and Phillips, 2002)

Within this Theory of Action, the Houston A+ Challenge focuses on the three imperatives of personalizing the learning environment, reducing isolation, and providing professional development for educators. Through many initiatives, the Houston A+ Challenge inspires “bakers” (the teachers, students, administrators, policy makers, parents, and community partners) to work collaboratively to fill the breadbasket with higher quality teaching and learning.

One of the newer initiatives in the Houston A+ Challenge “bakery” is the Teacher As Researcher Grant, which was established in 2004 to enable educators to deepen their work, conduct research inquiries about their practice, and make their work public. Since 1998, the Houston A+ Challenge has organized and underwritten the training of over 600 CFG coaches, yet survey responses and attendance at local coaches clinics indicated that very few of these trained coaches were still coaching CFG’s. The hope of the Houston A+ Challenge was that adding this “leavening” would enliven school communities and inspire them to renew their commitment to engaging in collaborative, reflective CFG work.

In March of 2004, a request for proposals was sent to every trained CFG coach in the Greater Houston area. The action research proposals were required to focus on

improvement of best practices in literacy, mathematics, and/or fine arts. Importantly, applicants had to apply as CFG's<sup>1</sup> of at least five people. Seven two-year, \$10,000 grants were awarded in May 2004, and five of these grants are still active.

A comprehensive range of student needs is addressed in the five inquiry projects. The awardees come from elementary, middle, and high schools, and the projects tackle questions dealing with literacy, math, and fine arts. Furthermore, many awardees are pursuing answers for how to teach some of the Houston area's neediest students including English language learners and Special Education students struggling with mandated standardized tests. The funded inquiry questions include:

1. Can computer programming increase mastery of algebraic computation skills?
2. How can social studies teachers improve the academic achievement of our students who are non-native speakers of English?
3. How can we better work with special populations such as severely handicapped, resource, content mastery, and English as a Second language students to increase their literacy?
4. How do teachers and administrators know that their individual practice impacts learning in aesthetics and literacy? and
5. How do CFG's impact student achievement in the core curriculum?

## **Putting the Ingredients Together**

The first question, "Can computer programming increase mastery of algebraic computation skills?" began as a hunger for increased algebra skills for all students since low algebra skills are often a barrier to success in Advanced Placement math and computer science classes. The teacher researchers in this group also wanted to increase interest in computer programming in middle school and high school students. The Teacher As Researcher (TAR) Grant helped these teachers build on their past experiences of teaching algebra and computer programming. They formed a math discussion group that included math teachers from a high school and a middle school. Together, they look at student work, engage in peer observations, and examine data. After one year of study,

---

<sup>1</sup> "A CFG is a professional learning community consisting of approximately 8-12 educators who come together voluntarily at least once a month for about 2 hours. Group members are committed to improving their practice through collaborative learning." (NSRF website, <<http://www.nsrffharmony.org>>)

the group has collected evidence that computer programming does increase mastery of algebraic computation skills. The lead teacher researcher reflected in her Request for Renewal Funding:

“Programming provided students with time to practice concepts, produce products, and apply problem-solving skills. . . . All of my algebra students passed the Texas ninth grade accountability TAKS test. My students earned the largest percent of commended scores, demonstrating preparation for AP level classes. This success was the result of teaching students to think about and plan solutions with the continuous use of design recipes using programming concepts.” (North, 2005)

For this research group, time and collaboration amongst teachers were the leavening that raised scores on the high stakes math test.

The second funded inquiry question is “How can social studies teachers improve the academic achievement of our students who are non-native speakers of English?” The question began as a hunger for closing the achievement gap in passing rates on the 8<sup>th</sup> Grade Social Studies TAKS (Texas Assessment of Knowledge and Skills). This middle school social studies department formed a CFG to encourage collaboration, look at data, and look at student work. The Request for Renewal Funding Report explains:

“We met once a month as a department and examined student work and teacher lessons. These meetings helped to clarify the problems that non-native English speaking students were having. The challenge was to present on-level content in a manner in which English language learners could actively participate and be successful. It was apparent that these students often were reluctant learners and knew more than they were able to articulate through standard classroom activities.” (Given, 2005)

This inquiry group also used grant funds for six teachers to attend eight days of professional development that provided teachers with research on language acquisition and practical classroom strategies based on this research. The lead researcher reflects:

“Teachers immediately used these strategies in their classrooms and were more than thrilled to share what they had learned with their colleagues. Student participation and success grew as these strategies permeated the entire school.” (Given, 2005)

Again, time and collaboration, along with traditional professional development focused on needs that teachers had identified, were the leavening that enriched student success in a content area.

The third group's question, "How can we better work with special populations to increase their literacy," began as a hunger to see students in special populations improve their standardized test scores. Because of changes in state and national education policy, students with labels such as "resource," "content mastery," and English as a Second Language are now being pushed to perform on standardized tests that they had previously been exempt from. The members of this already established, cross-discipline CFG at a large, comprehensive high school were inspired to research ways to improve the quality of teaching and learning for these special populations in all of their classes.

The TAR grant helped the teachers in this CFG maintain focus on their special population students. The lead researcher explained:

"The group collectively read articles and research books on classroom instruction. This foundation of a common vision and language, in addition to the already established norms and trust, helped in taking a hard look at each team members' practice and providing honest and constructive feedback for meeting the needs of the students. . . . We examined our teaching methods and the students' learning using student work, teacher work and reflective journals. The use of reflective journals proved to be a huge benefit in focusing on what was working for each teacher, so that we could then build on that strength in the classroom."(Kelley, 2005)

Thus, the CFG has injected the leavening of focus and reflection into these teachers' professional development.

The fourth question, "How do teachers and administrators know that their individual practice impacts learning in aesthetics and literacy," began as a hunger to reshape the public conversation about accountability. This group includes teachers and administrators from two school districts as well as a university professor and employees of centers and partnerships that are involved in school reform. Since 1998, this group has sustained inquiries into portfolio use—especially the use of school-wide portfolios as a means to stimulate reflection.

The Teacher as Researcher grant allowed the group to establish a new focus on the effectiveness of personal practice. Additionally, they sought out ways to reduce isolation and make their practice more public. They established a group blog and planned and presented an interactive seminar for the Houston A+ Challenge entitled

“Next Steps Series: Portfolios from A to Z.” The Request for Renewal Funding also reports:

At the April 2005 AERA [American Educational Research Association] annual meeting, five members of the CFG inquiry group presented a symposium entitled “Making Sense of Equity and Excellence: The Contributions of Reflective Practice and Portfolio Development.” Presenters discussed their field-based situations where the competing values of excellence and equity converged/collided and how personal and social reflection on tensions between excellence and equity deepened understandings. (Curtis, 2005)

Thus, continued sustained reflection deepened this group’s personal and collective understanding.

The final group’s question, “How do CFG’s impact student achievement in the core curriculum,” began as a hunger for the lead researcher to re-establish CFG’s on her campus. The school had had CFG’s in the past, but changes in personnel and leadership styles had deteriorated the school climate and the CFG’s had been disbanded. As an experienced CFG coach and facilitator for new coaches, this researcher had a gut feeling that re-involving the faculty in CFG’s could improve the school environment and increase student achievement, so she sought out funding to support the planning time and coaching necessary to bring her vision to life.

In year one, four CFG’s with volunteer members that represented approximately half of the faculty were established. With the full support of the current principal, the four coaches and lead researcher also met once a month as an inquiry group to study their focusing question “How do CFG’s impact student achievement in the core curriculum?” The inquiry group examined school-wide data and offered support for each other’s coaching dilemmas.

The data at the end of year one show a remarkable change in the school’s climate. The teacher turnover rate dropped to 5% in a region where the turnover rate hovers around 22%. Also, standardized test scores indicate that there may be a positive correlation between teacher membership in a CFG and student achievement. For example, 66% of K-2 students whose teachers were in a CFG were reading at grade level while only 54% of students not in a CFG were reading at grade level. Furthermore,

scores on the Texas Assessment of Knowledge and Skills show a similar trend. (See Figure 1)

**Figure 1**

<b>Student Test Results and Teacher CFG Involvement</b>					
% Passing	Grade 3 TAKS		Grade 4 TAKS		
	Reading	Math	Writing	Reading	Math
Teacher in a CFG	71	50	87	68	83
Teacher not in a CFG	63	43	77	65	66

In year two, over 90% of the faculty at this elementary school are involved in a CFG. The initial leavening of time along with the renewed focus, reflection, and collaboration found in the CFG’s certainly worked to enliven the whole school. (Matthews, 2005)

### **Trouble in the Kitchen**

Small changes in variables such as the protein content of the flour, the humidity, and the temperature of the kitchen can affect how much bread rises. Likewise, although these five CFG’s have found success in the first year and a half of their inquiry projects, they have also faced many challenges which impeded their growth. Most of these challenges are related to time and maintaining focus. At support meetings that the Houston A+ Challenge sponsored for all the Teacher As Researcher Grant participants, many teacher researchers expressed frustration about the lack of time in the school day for collaborative professional development. For example, one school changed its schedule from a four period per day block schedule to a seven period per day schedule, so daily teacher planning time was reduced from 85 to 50 minutes, and this CFG had to meet after normal working hours instead of during their common planning time.

Cross-school and cross-district CFG’s face even more logistical challenges. Differing school schedules and calendars make it difficult to establish and maintain collaborative groups. Furthermore, teachers resent ever-increasing “busy work” that was mandated by school or district administrators. Time spent fulfilling these mandates was time taken away from focusing on their own students’ needs.

An analysis of how the inquiry groups spent their Teacher As Researcher funds supports the idea that *time* is the biggest issue for establishing an effective CFG. (See Figure 2) Each group had a lot of latitude to decide how to spend the funds.

**Figure 2**

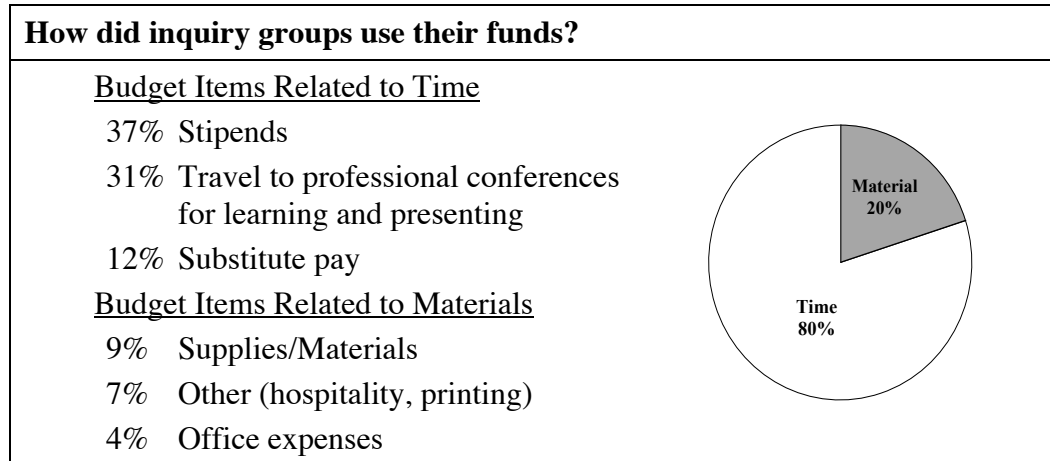


Figure 2 demonstrates that 80% of the overall monies for these five groups was spent on budget items related to time. Stipends could pay for planning time and meeting time. Substitute teacher pay allowed time for peer observations as well as planning and reflecting. Monies spent on travel to professional conferences also allowed the teacher researchers to have time out of their schools to break down isolation, engage in new learning, and collaborate with others. In contrast, only 20% of the grant funds were used to purchase materials. This seems to indicate that teacher researchers are starved for the time needed to grow professionally.

Besides time, the second most pressing challenge for nourishing a CFG is maintaining focus in the ever-changing educational landscape. (Clandinin and Connelly, 1995) Besides the changing schedules and mandates that were discussed above, groups also faced changes in personnel. Whenever group members move away or change positions, then new relationships have to be formed and nourished to continue the collaborative work. The teacher researchers also expressed frustration with the leadership of others. Administrators at the school and district level who do not understand or support collaborative, reflective professional development can easily dampen the work of a CFG. One teacher researcher put it this way: “The new assistant principals know something—but not enough—about the work to help in making a

positive impact.” (Conversation, November 30, 2005) Finally, two of the original seven inquiry groups had to drop out of the Teacher as Researcher grant because of drastic upheaval in their educational landscapes—their schools and administrative district offices were shut down by the school district.

## **Letting the Dough Rise**

In the baking process, leavening is the powerful agent that makes the dough or batter rise. Studying the ongoing effects of the Teacher As Researcher Grant shows that CFG’s can be an agent to make teacher learning “rise” as well. At the Teacher As Researcher support session in November, 2005, the participants reported that being in a CFG helped them focus on student needs and student achievement. This sharper focus did lead to teachers learning and sharing some specific strategies for improving instruction such as learning new methods of using technology or delivering instruction more visually to English language learners.

However, the most powerful learning came with the realization that “[our group learned] to value our own knowledge.” (Conversation, November 30, 2005) These groups are collaborative because they encourage building sustained relationships. Collaboration helps spread teacher knowledge, and sustained time for reflection in CFG’s allows better practices to become engrained. Yet, “yeast and chemical leaveners do not create new bubbles; they only enlarge air bubbles already in the dough.” (Corriher, 1997) In one particular group, being in a CFG pushed most of the participants to engage in higher learning. The desire was already there, and the CFG provided the inspiration for these Critical Friends to pursue advanced coursework and graduate degrees. Furthermore, being in the Teacher As Researcher CFG’s has encouraged many members of the five inquiry groups to reach out to other educators and spread their knowledge by presenting at seminars and conferences. Figure 3 is a list of the venues where these five inquiry groups have already presented their work.

**Figure 3**

<b>Venues where these five inquiry groups have already shared their findings</b>
AATC American Association of Teaching and Curriculum
Advanced Placement National Conference
AERA American Educational Research Association
ATE Association of Teacher Educators
Brown University TeachScheme 10 <sup>th</sup> Anniversary
CABE California Association of Bilingual Educators
Fondren Reforming Schools Summer Institute
Gifted and Talented Training
Houston A+ Challenge Next Steps Seminars
Houston ISD Professional Development
NABE National Association of Bilingual Educators
National School Reform Faculty 1 <sup>st</sup> Annual Research Forum
School-based staff development
Texas Computer Educators Association
Technology Applications Teachers Network
websites and blogs

This growth in teacher learning affects student learning as well. Besides the improvements in standardized test scores, the teacher researchers report that students are more engaged in classroom activities and more reflective in their work. Being in a CFG helps educators become more focused, collaborative, and reflective. These important habits are then passed on to students through such means as assignments that depend on collaboration and portfolios that develop skills in reflection.

## **Conclusions**

Analyzing the findings of the five Teacher As Researcher inquiry groups has shown that CFG's have the potential to transform professional development and improve student learning. In many ways, CFG's are to teacher learning and school improvement what leavening is to bread. First and foremost, CFG's are agents for advancing teacher learning and making it grow. Like yeast or baking powder, CFG's enlarge the "bubbles" of teacher knowledge that are already present in the school reform "dough": without the focus, collaboration, and reflection built-in to CFG practices, other ingredients will not

grow into sustained school reform. Finally, for greatest effect, CFG's should be introduced early and mixed throughout the school reform "dough" because, as Aunt Gladys learned, just a pinch poked in at the end of the process will not produce lasting school improvements—or edible biscuits.

## REFERENCES

- The American Heritage Dictionary*. Second College Edition. (1985). Boston: Houghton Mifflin Company.
- Clandenin, D. Jean, & Connelly, F. Michael. (1995). *Teachers' Professional Knowledge Landscapes*. New York: Teachers College Press.
- Corriher, Shirley O. (1997). *Cookwise: the hows and whys of successful cooking*. New York: William Morrow and Company.
- Conzemius, Anne, & O'Neill, Jan. (2001). *Building Shared Responsibility for Student Learning*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Curtis, G. (2005). Teacher As Researcher Grant: Request for renewal funding for 2005-2006. Houston, TX: Houston A+ Challenge.
- Given, M. (2005). Teacher As Researcher Grant: Request for renewal funding for 2005-2006. Houston, TX: Houston A+ Challenge.
- Kelley, M. (2005). Teacher As Researcher Grant: Request for renewal funding for 2005-2006. Houston, TX: Houston A+ Challenge.
- Matthews, M. (2005). Teacher As Researcher Grant: Request for renewal funding for 2005-2006. Houston, TX: Houston A+ Challenge.
- National School Reform Faculty. (2005). The Harmony Education Center, Bloomington, IN. [On-line]. Available: <<http://www.nsrffharmony.org>>
- North, K. (2005). Teacher As Researcher Grant: Request for renewal funding for 2005-2006. Houston, TX: Houston A+ Challenge.
- Reyes, P., & Phillips, J.C. (2002). *Evaluation Report: Lessons Learned on Urban School Reform*. Houston, TX: Houston Annenberg Challenge.