

Do They Make a Difference?

A Review of Research on the Impact of Critical Friends Groups

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It has been ten years since the National School Reform Faculty (NSRF) initiated the first critical friends groups (CFGs) as a job-embedded form of professional development focused on learning in community through the collaborative examination of student work and teacher practice. Though the work has expanded to many more school sites, and though some have named CFGs one of the most powerful professional development activities in which they have ever participated (Dunne & Honts, 1998), the body of research documenting the work of CFGs over the last ten years and providing evidence of professional development and school change is sparse. As we gather for the first NSRF research forum, it seems fitting both to examine the body of existing scholarship and to chart the course for future research. In this paper I seek to do just that – to provide an overview of research on CFGs, to draw initial conclusions about their impact on schools, teachers, and students, to analyze the strengths and weaknesses of the body of research as a whole, and to suggest directions future researchers might take to advance the work of critical friends groups as an effective approach to professional development and school reform.

Though my literature search uncovered numerous descriptive pieces about the work of CFGs, I found only sixteen research or evaluation studies pertaining to the impact that CFGs (or the use of protocols) have had on schools, teachers, or students. These studies include eight doctoral dissertations, three articles from peer-reviewed journals, three AERA conference presentations, and two reports. The table at the end of this document summarizes the research questions, population, and findings for each of these sixteen studies.

Review of Research

Analysis of this body of research reveals four claims about the efficacy of critical friends groups as agents of professional development and school reform:

1. CFGs foster a culture of community and collaboration.
2. CFGs enhance teacher professionalism.
3. CFGs have the potential to change teachers' thinking and practice.
4. CFGs have the potential to impact student learning.

Though the first two claims are substantiated by multiple research studies, the latter two become successively more tentative as outcomes depend on an increasing number of complex contextual factors.

CFGs foster a culture of community and collaboration.

Since the intention behind the CFG design was the creation of collaborative professional learning communities, it is not surprising that the research literature

indicates that critical friends groups do lead to collegiality and community. Survey data from two studies support this claim. First, the Professional Climate Survey used in the NSRF evaluation study indicated that CFG teachers collaborate more with each other than non-CFG teachers through such activities as sharing ideas and student work samples, meeting to discuss problems, working to develop materials, and seeking advice about professional issues and problems (Dunne, Nave & Lewis, 2000). Second, data from Seaford's (2003) survey on the five disciplines of learning communities indicates that CFG coaches perceive that the disciplines of systems thinking, team learning, and shared vision are manifested to a very great extent within critical friends groups, also pointing to a high degree of collegiality and community.

Case study data also supports this claim. Though the three schools in Armstrong's (2003) case study differed significantly both in their initial school culture and in the levels of community and collaboration attained after implementing CFGs, each moved a step further along her collegiality hierarchy: from isolation to moral support; from congenial to engaging in technical reflection; and from technical reflection to interpretive reflection and practice. Similarly, Curry (2003) found that participation in CFGs interrupted the norms of isolation at the high school she studied, creating collegial ties across departments and promoting a shared awareness of the school's reform philosophy, a more school-wide orientation towards teaching practice, and greater curricular coherence in the school. Nave (2000) also found that CFG participants engaged in collegial interactions outside of formal meeting times, while Fahey (2002) describes how a school leadership team developed more of a collaborative approach to their work through participation in a CFG. Clearly CFGs have an impact on school culture, bringing teachers together to talk about their work, deprivatizing teaching practice with public discussions, and creating ties of community and collegiality.

CFGs enhance a sense of professionalism in teachers.

Research examining preservice teachers, novice teachers, and veteran teachers all indicates that CFGs promote the development of the professional self. First, Franzak (2002) presents a case study of a preservice teacher whose sense of professional identity was very much tied to her participation in a CFG at the site of her student teaching placement. This student perceived other CFG members as models of the kind of professional she wanted to be: continuously learning and collaboratively inquiring into practice. Next, Van Soelen (2003) describes a CFG for novice teachers that took the place of a mentoring program. Rather than sit through training sessions on classroom management, rather than struggle through the year in mere survival mode, these teachers engaged in discussions of curriculum, assessment, and motivation, enriching each other's thinking and supporting one another in professional decision-making. These teachers had the opportunity to conduct themselves as professionals by initiating their own learning experiences as they asked their own questions and analyzed their own work through participation in a CFG. Finally, testimonials from veteran teachers indicate that their lunch time conversation grew in professionalism and that they gained new respect for the professionalism of their colleagues as a result of their participation in CFGs (Tice, 1999).

NSRF's use of the Professional Climate Survey also indicates that CFG participation promotes professionalism in teachers (Dunne, Nave & Lewis, 2000). In their survey responses, CFG members exhibited greater professional engagement than non-

members. They more strongly agreed that they felt they improved each year and that they were always eager to hear about ways to improve their teaching. They also more strongly agreed that they would put in a great deal of effort beyond what is typically expected of teachers. The Professional Climate Survey also indicated that CFG participants had a higher sense of efficacy and responsibility in their teaching, maintaining high expectations for students, changing their approach if some students are doing well, and more strongly agreeing that they can affect student achievement by trying new teaching methods. Their teaching practices were also less likely to be influenced by district or state policies.

Participation in CFGs supports a teaching identity that is more profession-oriented than technician-oriented. Group members seek to continually experiment with teaching in order to learn and improve. They exhibit a sense of agency in figuring out how to best meet the needs of their students. These professional qualities also form a foundation upon which CFGs might work to impact teaching and learning for school improvement.

CFGs have the potential to change teachers' thinking and practice.

Evidence for the impact of CFGs on teaching practice is less definitive than for their impact on teacher community and professionalism. One study's findings were inconclusive due to inconsistencies in the data (Theiss, 1998). Two case studies report on the shortcomings of CFGs in meeting their potential. Curry (2003) concluded that CFGs were insufficient as a resource for transforming the high school setting she studied. Though CFGs bridged departmental divides and provided a variety of perspectives, they limited opportunities for growth in subject matter knowledge and pedagogical content knowledge. The use of protocols did enhance the level of professional discourse in the school, but the structure of the protocols also inhibited teachers from fully pursuing some lines of inquiry. In sum, the researcher noted a waning interest in CFG participation as group members sensed their participation leading to diminished returns in professional growth over time. Additionally, Armstrong (2003) asserts that the CFGs she studied did partially support teacher's reflection on teaching practice. Group members became more aware of their practice and of their need to grow. Peer observations, when conducted, provided opportunities for problem posing while tuning protocols and observations both provide evidence of inquiry into practice. However, she observed little indication that members of these groups were experimenting, taking action, or implementing any new teaching practices.

Two studies lend weak support to the claim that CFGs have the potential to impact teacher practice. Nay (2002) cites interviews in which teachers claim to have made small changes in practice, such as revising a rubric, trying a new instructional practice, or using protocols with their students, but these are certainly not the type of changes that indicate dramatic growth or change over time, nor were they confirmed through observations. Tice's (1999) survey results indicate that CFG participants perceived they had grown in their willingness to take risks, to implement new strategies, to re-evaluate old teaching practices, to provide students with clearer rubrics and learning expectations, and to use student reflections to help them refine their practice; but again these assertions have not been confirmed through direct observation.

In contrast three studies provide substantial evidence of the role CFGs played in positively affecting teaching practice. Interviews and observations at twelve schools in

NSRF's evaluation study identifies several broad impacts of CFGs on the teaching and learning process: a shift in concern from covering the curriculum to making sure students have the basic skills needed for reading and writing across subject areas; a shift from teacher-centered to student-centered instruction and a pace that allows for mastery of material; and more thoughtful connections among curriculum, assessment, and pedagogy (Dunne, Nave & Lewis, 2000). Additionally, two studies provide more specific examples. Meyer & Achinstein (1998) present a "pivotal moment" that defined one novice teacher's further professional growth over the course of the next year: presenting a video sample from his math class provided the impetus for him to reframe the way he thought about class discussions and to bring about changes in his facilitation style. Nave (2000) acknowledges several significant changes in teacher thinking as a result of participation in CFGs: an increased desire to know and understand student thinking, a change in focus from teacher practice to student learning, and thinking through protocols to for assistance in lesson planning. He also found evidence of dramatic changes in teaching practices through both interviews and observations. The members of one CFG Nave studied demonstrated significant changes in their approaches to writing instruction over the two years they focused on improving student writing.

Taken together, these studies send a strong message that measurable changes in teaching practice are not guaranteed through the implementation of the CFG program. However, they do confirm the potential for professional learning through CFG participation.

CFGs have the potential to impact student learning.

Given the complexities of determining the impact CFGs have on teacher practice, it is no surprise that only two studies examine the link between CFG participation and student learning. Tice (1999) records that after the first full year of implementation at 23 schools in Michigan, 70% of responding teachers believed their participation in a CFG was having very positive or quite positive effects on student achievement. 54% felt they could see improvements in student work, while 18% cited improved test scores as evidence of these positive effects. While Tice's study relies on teacher perceptions of student achievement, Nave (2002) collected actual student writing samples that demonstrate marked improvement over the course of the two years that the elementary teachers in one CFG focused on student writing. Similar improvements were not evident in student writing samples from classes of teachers not involved in a CFG. This study indicates that when CFGs bring about changes in teacher practice, they also have the potential to positively impact student learning.

Numerous contextual factors support or hinder the development and impact of CFGs.

Dunne and Honts (1998) have identified three common developmental stages characteristic of critical friends groups: a support stage, an improvement stage, and a stage of questioning fundamental practices and purposes of education. These stages seem critical when considering the impact CFGs might have on schools. The trusting relationships that develop in the first stage have the potential to provide the foundation for a culture of collegiality, but unless the group enters the second or third stage, it seems

unlikely that a CFG would engage in the type of focused work with the potential for changing teaching practice and improving student achievement.

Ideally every CFG would develop into a “mature” group able to produce specific evidence of impact on teaching practice and student learning. Yet the research studies cited above indicate that not all CFGs function with this level of impact. Whether due to complexities of bringing about actual changes that impact student learning or due to the challenges in designing research studies that can glean evidence of such an impact, it appears much more likely that a critical friends group will affect the school culture in bringing about a greater sense of community, collaboration, and professionalism than it will bring about changes in actual teaching practice that might lead to greater student learning. With this in mind, it is important to ask what factors hinder or contribute to the development of a CFG into a mature group able to reach challenging goals for improved practice and student learning. These research studies indicate that the school context and administration, the implementation process, the characteristics of participants and their ability to develop trusting relationships, and meaningful content were key factors in the success or failure of critical friends groups.

School culture is one factor that can either inhibit or facilitate the development of healthy CFGs. First, district priorities make a difference. Testing pressures passed down from the district administration can hinder a teacher’s interest in experimenting or changing practice, while a CFGs preoccupation with testing and accountability eliminates time for content focused on student work (Murphy, 2001; Dunne, Nave & Lewis, 2000). Second, the values and support of local school administration are crucial. A school administrator whose leadership style supports teacher decision-making and fosters a shared responsibility among the staff for student learning is much more likely to support the development of a CFG than one who approaches school leadership with a top-down style. Additionally, a principal who models inquiry, provides time and space during the school day for groups to meet, and who articulates the connections between CFGs and the school mission facilitates the growth of a CFG (Dunne & Honts, 1998; Dunne, Nave & Lewis, 2000; Nave, 2000; Murphy, 2001). Third, the micropolitics of other local school reform efforts can hinder full participation in CFGs and squelch possibilities for developing the kinds of trusting relationships needed for collegial work (Curry, 2003).

The implementation process is a second factor that has bearing on whether or not CFGs attain their intended impact. Nave (2000) and Armstrong (2003) found that the more faithfully a CFG followed the intended program design of group meetings, peer coaching, and portfolio development, the more likely it was to engage in the kind of meaningful reflection and focused work that leads to changes in teacher practice. Armstrong (2003) suggests that a lack of training in asking good questions, in using protocols, or in the processes of peer coaching may hinder full implementation, while Murphy (2001) indicates that peer coaching requires such a deep level of trust that many CFG members feel uncomfortable with the process. An additional barrier to successful CFG development is a push to create too many CFG groups too fast without taking the time to promote an understanding of the purpose and process that lies behind the initiative. Committed volunteers who recognize why they make the commitment are much more likely to engage in meaningful work (Murphy, 2001).

A third factor that influences the development and potential of a critical friends group is the individual characteristics of group members and their ability to develop trusting relationships. When individuals voluntarily participate and are already reflective

professionals, open to new ideas, a CFG has more capacity to engage in meaningful work (Murphy, 2001). A coach with well-developed skills in building community and supporting group goals and processes is a tremendous support to a CFG (Nave, 2000). In fact, Murphy (2001) suggests the need for continual training and support for coaches beyond the initial training opportunities since coach “burn-out” was one of the factors leading to the termination of several CFGs in her study. While participants’ concerns for personal comfort and relationships might hinder the work (Little, et. al, 2003), trusting relationships and a sense of personal responsibility for the success of the group are two important aspects of group dynamics which contribute to a CFG’s ability to truly engage in the work of asking one another challenging questions and critically examining work samples (Dunne & Honts, 1998; Murphy, 2001; Armstrong, 2003).

Ultimately the rigor of the content broached by a critical friends group has enormous bearing on its potential to stimulate professional growth and improved student learning. Unlike training programs that automatically bring with them specific research-based content, content for a CFG depends upon the ability of participants to set goals for student learning, to access relevant outside resources, to identify appropriate student and teacher work samples for the group to examine, to develop questions for framing protocols and observations, and to challenge one another to think in new ways (Dunne & Honts, 1998; Murphy, 2001; Little, et. al, 2003; Armstrong, 2003). If a group spends most of its time on building trust through activities unrelated to their teaching practice or focuses more on engaging in the process of a CFG than connecting that process to specific improvement goals, it is unlikely to see improvements in student learning. *Time* spent in the rigorous task of analyzing student work has a strong correlation to changes in teachers’ thinking and practice (Dunne, Nave & Lewis, 2000).

This synthesis of research certainly indicates that critical friends groups promote collegial and collaborative school cultures and enhance teacher professionalism. Whether or not those collegial professional relationships result in meaningful reflection, adaptations in teacher practice, and improved student learning depends to a large extent on the numerous complex contextual factors that either support or hinder a group’s efforts to engage in critical reflection of meaningful content. More research and evaluation studies are needed in order to fully understand the complex relationships between teacher participation in a CFG and the resulting outcomes. However, before identifying a research agenda, it is important to analyze the strengths and weaknesses of the past decade’s body of scholarship.

Analysis of the Research Base

There are several strengths in the body of research reviewed for this paper. First, these studies represent a wide range of critical friends groups, including groups meeting at elementary, middle, and high schools; in urban, suburban, and rural settings; involving preservice, novice, and veteran teachers. Researchers have purposefully examined “model” CFGs, but they have also sought to understand contexts in which CFGs have failed to accomplish all their intended purposes. Additionally, the widespread use of case studies and qualitative data collection techniques, such as observations, interviews, document analysis, and video analysis has yielded rich descriptions regarding the school context and the experiences of teachers as they participate in critical friends groups. Not only do these studies report on outcomes, but research reports also examine the

contextual factors leading to those outcomes. Simultaneously, several research designs primarily based on surveys add to these rich contextual descriptions by documenting trends on a larger scale. Finally, this body of research delves into real issues of evaluation beyond mere participant satisfaction. Guskey (2000) suggests five levels of evaluation necessary to determine the merit or worth of a staff development program: participants' reactions, participants' learning, organization support and change, participants' use of new knowledge and skills, and student learning outcomes. Though it is definitely worthwhile to consider statements participants have made naming CFGs one of the most powerful professional development activities in which they have ever participated (Dunne & Honts, 1998; Tice, 1999), researchers have also taken seriously Guskey's charge to look deeper and have begun to explore organizational changes, teacher learning and changes in practice, and the effects on student achievement.

Though this current body of research has several strong points, it also has a number of holes, or areas of weakness. First, over half of the studies cited in this paper targeted school sites in which teachers had participated in CFGs for only one or two years. Dunne and Honts (1998) point out that it takes time for a group to develop a trusting community necessary to engage in meaningful and "mature" work. Armstrong (2003) and Franzak (2002) each observed a CFG that spent its entire first year focusing on community building and establishing the usefulness of protocols. Similarly, due to time constraints faced by the researchers, all of the research for these studies was conducted over only one or two year time spans. Learning and change both are often slow processes, difficult to capture in such short time spans. Second, the large majority of CFGs examined for these research reports are also linked to the Coalition for Essential Schools or another major reform effort. Though all the initial cohorts of CFG coaches came from schools involved in these reform initiatives, it is also important to examine the impact of CFGs as a form of teacher-centered professional development outside of these formal initiatives. Finally, many of these research reports rely heavily on self-reported perceptions of teachers, coaches, and principals, particularly in regards to changes in teacher practice and student achievement. Though the relationship between a professional development program and changes in teacher practice and student learning is complex (Guskey, 2000), it is important to provide more substantial evidence, whether through use of classroom observations, measures of teacher growth, analysis of student work samples over time, or through other types of student achievement data.

Directions for Future Research

Having reviewed the body of current literature and examined its strengths and weaknesses, it is now appropriate to set forth a research agenda that will yield even further evidence regarding the efficacy of critical friends groups as a form of professional development and school reform. Future research and evaluation studies should inquire more deeply into CFG process, sustainability, content, and impact on teaching and learning by exploring both local cases and national trends.

Process

First, there are questions of process. According to the NSRF theory of action, collegial reflection, peer coaching, and portfolio development are three processes that

complement one another in bringing about school reform, yet many CFGs choose to implement only one or two of these processes. Further research is needed to determine whether participation in monthly meetings alone can lead to sufficient critical reflection to cause teachers to adapt their practice to better support student learning. In what ways do protocols enable or constrain lines of inquiry that can deconstruct prior assumptions and construct new knowledge for best practice? Without the use of peer coaching and portfolio development, what impetus is there for personal professional reflection on an ongoing basis? What learning opportunities are available for participants when it is not their turn to present work?

Sustainability

Many individuals find it interesting to participate in a new and different process, but substantial learning requires substantial commitment once the newness has worn off. Evaluators should also collect large-scale national data to determine the extent to which CFGs *do* develop past the initial stage so that they begin to engage in truly substantive work. To what extent are CFGs able to sustain past the initial year or two of the program as an ongoing source of professional learning and stimulation? Do participants maintain interest and enthusiasm in the work of CFGs over time, or do they lose interest once the novelty of a new process has worn off? Do CFG members continue to benefit from participation over time, or is there a ceiling for potential learning?

Content

Second it is important for researchers examine issues of content in CFGs, particularly since this is one professional development initiative that is not connected to a particular type of content. How do individual teachers choose work samples to present to the group? How do they frame their questions and choose the particular protocol to use? Are there specific types of content that yield more fruitful conversation and more powerful learning opportunities? Answers to these questions could inform program developers and CFG coaches as they consider how to better train and support participants in identifying substantive content and engaging in focused inquiry. Additionally, it is important to investigate how a CFG, as a whole group, monitors the rigor of its work. Are focused goals necessary to promote individual and group professional development? Does it make a difference if those goals are shared group goals or individual goals? Does group reflection propel the group towards more intentional types of learning opportunities?

Impact

Identifying the impact of any staff development initiative on teaching and learning is a complex task, since results are dependent on implementation, content, continuing support from administrators, teachers, and parents, local, state, and national policy, and numerous other factors. Also, it would be unusual for a staff development initiative to be the only influence on a teacher's growth and development for a given time period. Additionally, an initiative might not only impact intentional goal areas, but might also result in numerous unexpected outcomes. Evaluators must ask themselves what

counts as valid evidence of impact. How much weight does self-report have in comparison to observable change? How does one measure changes in belief or perception? NSRF's emphasis on using the opportunities afforded by CFG structures to meet the needs of local contexts (which all have different goals, needs, cultures, and starting points) precludes the possibility of one set of questions useful for examining impact. Therefore, the following questions, though useful for beginning to consider the impact of CFGs on teaching and learning, should not limit inquiry into other types of impact or through other types of questions.

First, further investigation is needed regarding the impact of CFG participation on teacher growth and development. Individual growth is a process that is difficult to trace, as it may take months or years before intangible internal changes manifest themselves in outer actions. It may be difficult for a teacher to recognize changes in her thinking or practice or to attribute those changes to a particular source (Nave, 2003). Future researchers should design longitudinal studies to follow group members over three to five years since growth and change can be such slow processes. Researchers should also design studies in which both interviews *and* classroom observations serve as data sources so that changes can be more clearly documented. Some teachers, on the other hand, can point to pivotal incidents that initiated dynamic changes in their thinking and practice or that significantly influenced their professional development (Meyer & Achinstein, 1998). Researchers should examine what types of circumstances lead to these pivotal professional moments for CFG members and how to bring about more of these moments. Additional questions of interest include: To what extent does participation in a CFG change an individual's habits of conversation or inquiry? To what extent does the use of protocols for looking at student work change the way teachers analyze or think about student work outside of the group? Are there particular stages of teacher career development at which CFG participation is more beneficial than others?

It is also important for researchers to design studies examining the impact of CFGs on student learning. Collecting samples of student work over time could yield compelling evidence for the efficacy of CFG work. Examining the relationship between CFG participation and equity, or achievement for *all* students, is also an important research endeavor. Finally, evaluators should examine the potential of CFGs as agents of school reform in support of student learning in comparison to other forms of teacher-centered staff development.

Conclusion

Available research indicates that many teachers have responded enthusiastically to their CFG experience and that CFGs have promoted positive changes in organizational areas, such as teacher professionalism and school culture. Research also indicates that CFGs have the potential to provide learning opportunities that transform teacher practices and student learning, but that they are no guarantee of such reform. There is especially a need for more studies to examine the links between CFG participation, changes in practice, and student learning. In the meantime, it is important for program developers, district administration, and CFG coaches and participants to consider Armstrong's (2003) question: Which is more important, reaching a specific mark or standard, or making progress from the baseline? If CFGs are able to facilitate a move in a more positive direction, then there is definitely merit in continuing the work.

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Author	Focus Questions	Population	Summary of Findings
Dissertations			
Armstrong (2003)	<p>What was the experience of reflective practice and collegiality for participants in three CFGs?</p> <p>What particular activities supported reflective practice or collegiality?</p> <p>How can reflective practice and collegiality be more effectively supported?</p>	CFGs at three urban CES high schools	<p>Though all participants in this research study were satisfied with their CFG experience, there was considerable variation in CFGs across schools. Armstrong found that CFG participation did move teachers a step further along a collegiality continuum, but that the initial school culture may have been a constraint on forging even deeper collegial ties. The program itself was weak in supporting rigor in reflective practice. Rigor depended more on individual efforts than on program structure. Success also depended upon the quality of questions raised and the level of willingness to be challenging and truthful. Armstrong concluded that success in a CFG depends on the degree to which group participants are able to keep the program meaningful and rigorous.</p>
Curry (2003)	<p>How are CFGs a resource for school reform and professional development?</p>	Six CFGs in a CES high school	<p>This case study indicates that CFGs both enable and constrain school culture for instructional improvement and school reform. CFGs promote collegial ties across departments, curricular coherence, and a school-wide orientation. However, the micropolitics of reform hindered full participation in CFGs, intensifying debates and schisms. Though the staff preferred CFGs to other forms of staff development, CFGs in this context lacked the depth, continuity, and coherence and robustness. The staff's interest in participation waned as they perceived diminishing returns over time. Therefore, the author concludes that CFGs were insufficient as a resource for transforming this high school.</p>
Nave (2000)	<p>How do CFGs develop over time?</p> <p>Does the thinking and practice of CFG participants change over time? If so, how?</p> <p>A test of the NSRF theory of action.</p>	An elementary, middle, and high school from NSRF cohort three	<p>Nave reports that CFGs do develop into collegial communities with collegial interaction outside of group meetings. He found evidence for changes in teacher thinking, changes in teacher practice, and improvements in student achievement. Factors supporting these changes include faithful implementation of the CFG program, a skilled coach, a principal who models inquiry, the commitment of members, and a supportive school context. He asserts that a higher degree of CFG implementation yields greater changes in teachers.</p>
Nay (2002)	<p>Does involvement in a CFG create opportunities for professional growth? Do teachers adapt and change their classroom practice as a result of their participation in a CFG?</p>	One CES high school's CFG	<p>Nay concludes that CFGs do provide opportunities for professional growth and that teachers do change their practice as a result of participation. However, evidence cited in the study points to small cosmetic changes in teaching, such as a revised rubric, rather than significant learning, growth, or transformation of practice.</p>
Murphy (2001)	<p>From the perspectives of various stakeholders, what internal or external factors support or hinder the work of CFGs in large urban high schools? What aspects of the implementation effort may have contributed to the failure to sustain?</p>	CFGs in one urban high school	<p>Though Murphy identifies several factors that supported the work of CFGs (voluntary participation, trust, collective responsibility, collegial discourse, etc.), she identifies numerous hindrances that ultimately led to the elimination of CFGs from one high school after five years of implementation. Changes in district level administration, an isolated and top-down school culture, district focus on accountability, coach burn-out, attempts to create too many groups all at once, and participants' rejection of peer observations acted as barriers to CFG work. Murphy also found that without a focused goal, CFG activities were highly disconnected. Participants were more focused on the process than the content.</p>

Seaford (2003)	Do CFGs contribute to the development of learning organizations? Do schools with CFGs exhibit the five learning disciplines?	CFGs in CES schools	Seaford examines CFGs through the lens of organizational development, particularly Peter Senge's five learning disciplines of systems thinking, team learning, shared vision, personal mastery, and mental models. Data from this study indicate that both CES schools and CFGs develop these five learning disciplines, but that it may be easier to do so within a CFG than school-wide. CFG coaches reported that their CFGs exhibited all five of these disciplines to a very great extent, with systems thinking the greatest and mental models the lowest. Seaford found a significant difference between the manifestation of the five disciplines in CES schools and their CFGs, with the CFGs ranking higher. On the other hand, the data indicated no significant difference between the manifestation of the five disciplines in a first year CFG schools and those with two or more years of CFG work.
Theiss (1998)	Are there differences in teachers' perceptions and practices over time as a result of participation in CFGs?	CFGs at eight suburban schools involved in reform initiatives	Due to inconsistencies between survey and interview data, results of this study are inconclusive. However, Theiss asserts that these CFGs did become collaborative communities and that reflection served to help group members build norms and share knowledge. On the other hand, there was little evidence of the kind of critical reflection that leads to change and growth. Theiss suggests that real change takes time, and that perhaps a two year time period is not long enough to see real change occur.
Van Soelen (2003)	What happens when novice teachers participate in a CFG? How do they make sense of 1 st year experiences? How do they make decisions about teaching & learning?	Novice teachers	This CFG functioned as a mentoring community for novice teachers, a community with reciprocal rather than hierarchical relationships. Rather than those topics traditionally used in induction programs for novice teachers (like classroom management), these teachers engaged in discussions of curriculum, assessment, and motivation, topics stemming from their own interests and authentic work and that indicate they have surpassed Fuller's initial stages of teacher development. These novice teachers were able to provide multiple perspectives, give feedback for decision-making, and enrich each other's thinking as agents of change for one another. However, putting learning into practice was more difficult than learning to see or think in a new way.
Journal Articles			
Dunne, Nave, & Lewis (2000)	Program evaluation	12 schools – observations & interviews 62 schools--surveys	Surveys indicate that those who participate in CFGs perceive themselves as having more of a professional role as an educator and more opportunities for professional development. Interviews with CFG participants reveal that participation has brought about changes in the way they think about their students and their teaching practice. This article also suggests several contextual factors that affect the success of a CFG.
Franzak (2002)	In what ways will participation in a critical friends group impact the development of an English teacher's identity?	One preservice teacher	Franzak finds that participation in a CFG with practicing teachers at the student teaching site had a positive impact on the shaping of one preservice teacher's professional identity. She views other CFG members as role models of the kind of professional she wants to be, one who continually learns. She feels CFGs have political and activism potential with their provision of safety, yet change; community, yet purpose; celebration, yet critique. Franzak concludes that participation in a CFG with inservice teachers can be a powerful experience for developing a positive professional identity.

Little, Gearhart, Curry, Kafka (2003)	How does looking at student work happen? How does group practice open up or shut down teacher talk? What hinders the process?	CFGs, Harvard's Project Zero, Academy For Educational Development	These authors describe how looking at student work brings teachers together for structured conversation. They name several groups practices that open up teacher talk: the flexibility to use tools creatively for local purposes, the ability to exploit subject expertise and examine subject issues, a balance between comfort and challenge, and skilled facilitation. They also describe a number of hindrances to the work: uncertainty about what work to bring, concerns for personal comfort and relationships, and scarce time.
Conference Papers and Research Reports			
Achinstein & Meyer (1997)	How friendly can critics be and how critical can friends be? What are the tensions? AERA presentation	Novice teachers group using charettes	Achinstein and Meyer identify several tensions in the collaborative work of novice teachers. It was difficult for these novice teachers to balance their group time between sharing woes and engaging in professional work. Tensions arose in finding a balance between meeting the learning needs of the group versus the individual. Several members left the group, feeling that their personal needs were not met. Meeting with this cross-school group provided needed support, but it also isolated members from their colleagues at school. Finally, the researchers ask whether novice teachers are too vulnerable to participate in this type of work, especially since critique often arose without provision of the next steps for improvement.
Dunne & Honts (1998)	Program evaluation AERA presentation	NSRF's Initial CFG groups	The authors first identify three common stages of development through which CFGs seem to pass. Then they describe common problems that inhibit the work: group dynamics/establishing trust; lack of administrative support; school culture; and access to resources/rigorous content.
Fahey (2002)	District evaluation	District administrators' use of protocols	This report indicates that the use of protocols fostered a more professional collaborative community for the school leadership team. Administrators learned skills as a team, such as reflecting, asking clarifying and probing questions, listening, sharing dilemmas, collaborating to solve problems, etc., but there is no indication of organizational learning because the practice was not made normative. Several obstacles hindered the work: a lack of clear connection to organizational goals, a lack of shared purpose, and inconsistent support of the superintendent.
Meyer & Achinstein (1998)	What promises and dilemmas emerge from the enactment of critical friendship in the context of a novice teacher learning community? AERA presentation	Novice teachers group using charettes	In this report, part 2 of the Achinstein and Meyer's 1997 presentation, the authors note the promises critical friendships offer. Participation in this group provided a bridge from the teacher education program into the first few years of teaching. Presenting to the group provided pivotal moments for several teachers that defined their further professional growth over time. Participation in this group did lead several teachers to change both their beliefs and their teaching practices.
Tice (1999)	Evaluation study	23 Michigan CES schools	According to self-reports on teachers' experiences and perspectives after CFGs had been implemented for about one year, CFGs had begun to have positive effects on student achievement, foster a culture of inquiry among CFG members, change teacher practice, provide teachers with meaningful opportunities for professional development, create professional networks among teachers around the state, empower teacher leaders, and involve teacher leaders in the leadership structure of some schools.