

Evaluation of the Developing Leadership to Sustain Change 2 Project, 2004-2005

A Databrief for DLSC2
Prepared by the PRAIRIE Group, UIC College of Education

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Introduction

With the support of funding from the Illinois State Board of Higher Education, the Developing Leadership to Sustain Change (DLSC2) project worked from 2003-2005 to train two cadres of teacher-leaders in the Chicago area. There were cadres of 2003-2004 and 2004-2005 Math Trailblazers teacher-leaders and 2003-2004 and 2004-2005 Connected Math teacher-leaders. The goal of DLSC2 was to increase the effectiveness of how these teacher-leaders facilitated Math Trailblazers and Connected Math workshops in the content and pedagogy of standards-based curricula. The desired outcome of this work was to

- create a larger cadre of teacher-leaders in Chicago and Harvey who have the pedagogical content knowledge to support teachers implementing Math Trailblazers and Connected Math
- devise an improved model of training and supporting these teacher-leaders- especially as they facilitate professional development sessions

Evaluation Questions

In August of 2005, The PRAIRIE Group of UIC was hired to externally evaluate the 2004-2005 DLSC2 teacher-leader professional development. This external evaluation focused on three areas:

1. What are the teacher-leaders developed and used during both years? How many teachers attended each session? How many completed all of the training sessions? What was their treatment? Who provided the professional development? What were the characteristics of the teacher-leaders?
2. How were the teacher-leaders used for teacher-leader professional development? How was the partnering between teachers decided? Did the finalized partnership plan reflect the initial partnership criteria? Why or why not?
3. What do teacher-leaders view as the key supports they have received as they facilitate workshops? What do they see as their key challenges? In what ways would they suggest the model of support for teacher-leaders remain the same? In what ways might it improve? What variations or similarities exist according to

different characteristics (i.e. by cadre, by certification experience, veteran teacher or newly experienced, etc...)

Data Collected

The data collected for this external evaluation includes:

- Review of documentation of No Child Left Behind grant proposal and the enacted project work (which will help answer Questions 1 and 2 of the Evaluation)
- Group interviews with Math Trailblazers staff on October 16, 2005 and with Connected Math staff on October 4, 2005 (which will help answer Questions 1 and 2 of the Evaluation)
- An observation of 1 (August 23, 2005) day of teacher-leaders facilitating Math Trailblazers professional development and 1 (August 25, 2005) day of teacher-leaders facilitating Connected Math professional development (for context, to shape interview protocol, and to help answer Questions 2 and 3 of the Evaluation)
- Written reflections from 5 Math Trailblazers teacher-leaders and 4 Connected Math teacher-leaders collected from December of 2005 until February of 2006 (which will help answer Question 3 of the Evaluation)¹

Findings

The teacher-leader professional development and utilization of teacher-leaders were handled independently by the Math Trailblazers and Connected Math staff. We therefore share separate evaluation findings for the Math Trailblazers teacher-leaders in the 2004-2005 cohort and then for the Connected Math teacher-leader 2004-2005 cohort.

Math Trailblazers

Question 1: Professional Development for Teacher-Leaders

By August of 2005, the teacher-leader cadre included 26 teacher-leader candidates, 12 newly experienced presenters and 8 truly experienced presenters. The Spring 2005 teacher-leader professional development had three audiences: (1) brand new teacher-leaders, BN (2) newly experienced teacher-leaders, NE and (3) truly experienced teacher-leaders, TE. Described by a Math Trailblazers staff person:

Basically what we had were the “newbies”, people who were brand new to us as workshop leaders and those were people who we had either missed the year before then- they might have been doing teacher certification or they might have been in school they whatever- the people we had thought would be good to work with. And then we had a list of people who were what we called “newly experienced” the people who had worked with us the previous year... we decided to invite anybody back because we thought that they would learn more the next time around. Then the third group were the ones that we call the “truly

¹ Teacher-leaders were recruited to participate in this evaluation via e-mail both by Math Trailblazers and Connected Math staff and evaluators. Math Trailblazers teacher-leaders were also recruited by evaluators at a professional development session in February.

experienced” so this group included people whom we had worked with for 8 years (Math Trailblazers Focus Group, 2005)

During 2005, there were 5 dates for teacher-leader professional development: Monday, February 28; Monday, March 7; Monday, April 4; Monday, April 19 and Thursday, May 26. Linda Miceli, Lisa Mackey, Cheryl Kneubuhler, Barbara Crum and Joan Bieler were the primary professional development facilitators for these five meetings. The teachers had to complete 18 hours of professional development training. After completing the training, they were eligible to co-present Math Trailblazers professional development in one of three sessions over the summer.

All of the teacher-leader professional development participants had attended Math Trailblazers professional development before so they did have prior knowledge of Math Trailblazers in a classroom setting. Specifically for BN teacher-leaders, one Math Trailblazers staff person stated, *some teachers stood out, they were embracing the philosophy of the curriculum and they seemed really excited, they expressed interest in being a facilitator of the workshop so those people made the round of newbies and we did that for everyone from K-5, teachers that show potential to be workshop leader (Math Trailblazers Focus Group, 2005).* The common characteristics of (1) showing an interest in becoming a Math Trailblazers facilitator or workshop leader and (2) embracing the philosophy of Math Trailblazers can also be attributed to the NE and TE teacher-leaders who, as demonstrated by their long standing use of and commitment to Math Trailblazers, wanted to become a workshop leader and believed in the philosophy.

Math Trailblazers

Question 2: Teacher-Leaders as Professional Development Facilitators

Math Trailblazer staff paired BN teacher-leaders and either NE teacher-leaders or TE teacher-leaders with the goal of having these partners organize and create an agenda for their summer professional development session. The partnerships were developed according to experience, personality-type and scheduling compatibility. According to experience (BN, TE, NE), BN teachers were paired with either TE or NE teacher-leaders. Creating partnerships with compatible personality types was, as stated by Math Trailblazers Staff people, admittedly more difficult. Math Trailblazers Staff people describe the partnering process,

MTB Person A: And one of those things from 2004-2005 was to start this process a little bit earlier so that we have more meetings of the mind if you will. So we have several opportunities for people who come together and kind of establish that you know camaraderie just amongst being colleagues. So there’s no “well I have been teaching for...” and the new person feeling like “Well, they’re trying to just railroad me. I don’t get a chance to say anything.” If you have more time to sit and talk, work through activities and just kind of express what you are thinking about, it builds that relationship so that when you get in front of an audience, hopefully, you don’t have any blow-ups or limited blow-ups.

MTB Person B: Well also, we looked to a certain extent at personality types as much as we knew. And this really was with the more experienced people because we have some people who are very take charge and very directive and we decided not to put someone who is a little bit more meek you might say. And so you know, we want to have it more equal at least with the people who we knew really well. We also worked hard with our truly experienced and not just in meetings but also in formal conversations and “oh by the way Connie don’t forget we are trying to do this” or “you know I have been thinking about this and maybe it would be helpful if you...” trying to get the word across to them-I like the word embrace that MTB Person A has been using-to embrace those new individuals and to bring them along as they come-and that’s the part that I feel good about. We don’t really have a good diagnostic for or a good personality test or anything like that. And we were lucky that without exception, anyone that was new this year came-came, they came on time, they came prepared, they came with that enthusiasm, so I think that’s one of the reasons why I feel so good about the work we did this summer (Math Trailblazers Focus Group, 2005).

Reflecting upon the first year’s partnering process (03-04), the Math Trailblazers Staff people recognized the need to start the process earlier to see peoples’ personalities and presenting styles so as to make more effective and even partnerships. Also, providing time for the partners to meet, get to know each other and develop agendas helped to reduce the element of *surprise* during the actual professional development sessions. One Math Trailblazers Staff recalled a *surprise* during a 2004 professional development session stating,

...one thing that did surprise me is that you have and I spoke of this a little bit earlier, where you have people sitting at a table planning and everybody seems to be on the same page, on board, everybody is jumping through hoops and they are happy. Yes, ok have we all got a plan together and we have planned together and they are ready. But when the curtain goes up, something totally different happens. Something totally different happens. And that’s where we were caught, we didn’t see that coming (Math Trailblazers Focus Group, 2005).

In order to address this unexpected element at future professional development sessions, partners paired during the 2004-2005 DLSC2 project were required to produce paperwork including an agreed-upon agenda for their summer professional development session. Another support which was partially aimed to reduce the *surprise* element at professional development sessions, were Math Trailblazer Mentors. The mentors provided added support to partnerships in helping them to create an agenda to ensure that *there’s not one person hogging the stage and the other person just sitting in silence* (Math Trailblazers Focus Group, 2005). By reflecting upon their experiences during the 03-04 session, the Math Trailblazers Staff people were able to include agendas and mentors to ensure that *surprises* in the previous year were eliminated or reduced in the 04-05 year.

The partnerships were also decided according to the availability of the teacher-leaders. The teacher-leaders would need to be able to facilitate the workshop for the same week of the summer and be able to meet with each other to create their agendas and plan.

The actual partnerships did resemble the partnership criteria set in DLSC2 plans to the extent possible considering the amount of attendees and professional development sessions. A BN teacher was always paired with either a NE or a TE leader. However, due to the high volume of professional development sessions and professional development enrollment, sometimes either a NE and TE would present or two NE people would present or a TE would be the sole presenter at the summer professional development (Math Trailblazers Focus Group, 2005). Out of the estimated 22 K-5 professional development sessions held during the summer of 2005, 10 were partnerships between BN and a NE/TE person, 5 were partnerships between a NE and a TE person, 2 were partnerships between two NE people and 5 were sole presentations by all TE people. As stated in the Math Trailblazers Focus Group, all partnerships and sole presentations are presumably due to the high enrollment at the professional development sessions.

Math Trailblazers

Question 3: Teacher-Leader Reflections

Responses from 5 teacher-leaders (3 NE and 2 BN teacher-leaders) were overwhelmingly positive regarding their experiences in the Math Trailblazers teacher-leader training. When asked whether the Leadership Training prepared them to be effective leaders, all respondents said *yes*. In describing the high quality of the training, all of the teacher-leaders stated that they liked how the training went through *step by step using hands-on procedures with provided materials* of the lessons. Teacher-leaders also described the Math Trailblazers staff as an excellent resource and support; one Math Trailblazers Staff person in particular was mentioned in two of the five written reflections stating that this person *really held my hand and walked myself and my colleagues through the process*. Both the support of Math Trailblazers Staff people and the *step by step* lessons were described as great supports during the training.

Two key challenges were identified by the five written reflections: (1) inadequate time to work in partnerships and (2) more teaching examples. Four of the five written reflection respondents commented that they did not have enough time to work with their partners. Best stated by one teacher-leader,

Our only complaint was always time. We never had enough time to work together, to organize our supplies, to make sure that our materials were available at the testing site, to set up the classroom seriously. My partner and I took what we did VERY seriously... We were always working way overtime to get ready with out room and our materials (Math Trailblazers Written Reflection, 2006).

The other teacher-leaders commented that they did not have the time necessary to construct and obtain all of the materials for the professional development and to work with their partners to develop their professional development session.

Four of the five teacher-leaders also stated that they would have liked more classroom examples regarding Math Trailblazers implementation in the classroom environment. One teacher-leader commented,

I would also like to hear from veteran teachers (not just TIMS staff) on various ways that they have helped modify for ESL, slow learners, SPED and gifted. I know they have touched on this but I really think they need to spend more time giving presenters more concrete suggestions in order to be prepared for the questions they will receive (Math Trailblazers Written Reflection, 2006).

Another teacher commented along a similar note that she wanted to hear more from other teachers regarding their teaching styles and instructional approaches in using Math Trailblazers. This teacher commented, *Sort of like how we never get to see what's going on in each others' classrooms, but then we get a snapshot, and it's like a whole new idea or approach at our finger tips! By learning from each other, we are sometimes able to make the best and easiest adjustments to our practice (Math Trailblazers Written Reflection, 2006).* Integrating more classroom approaches in order to answer questions pertinent to specific populations in an urban school context was a common suggested improvement by the teacher-leaders.

Math Trailblazers Discussion Questions

- (1) Considering the scarce resource of time, how can more time be allocated to partnership work? Given the teacher-leaders' challenge of organizing materials for the workshops, can more efficient ways of managing the materials be found?
- (2) In light of the suggestions made by the past teacher-leaders, how can the teacher-leader professional development offer more classroom approaches to the curriculum? How can this be achieved in consideration of time constraints?
- (3) How can Math Trailblazers continue to improve their teacher-leader professional development based upon evaluations from participants and lessons learned from past years?

Connected Math

Question 1: Professional Development for Teacher-Leaders

The table below reflects the documentation provided to us by the Connected Math Staff displaying the teaching background, CM experience level, and attendance of each teacher-leader during the 2003-2004 year. The bottom row of the table displays the total attendance of each professional development session.

Professional Development for Connected Math Teacher-Leaders in 2003-2004: Who was Trained?								
Teacher-leader Code	Teaching Background	Experience with CM	Attendance					
			Total	2-26-04	3-31-04	4-24-04	5-19-04	6-5-04
N1A	Unknown	3	5	X	X	X	X	X
N1B	Unknown	Unknown	5	X	X	X	X	X
N1C	Unknown	2	5	X	X	X	X	X
N1D	CPS	4	5	X	X	X	X	X
N1E	FCPS	3	5	X	X	X	X	X
N1F	MGM	1	5	X	X	X	X	X
N1G	Unknown	Unknown	4	X	X	X		X
N1H	Unknown	Unknown	4	X	X	X		X
N1I	CPS	3	4		X	X	X	X
N1J	MGM	2	4		X	X	X	X
N1K	MGM	2	4	X	X		X	X
N1L	MGM	1	4	X		X	X	X
N1M	MGM	1	4		X	X	X	X
N1N	Unknown	Unknown	3	X	X	X		
N1O	Unknown	Unknown	2		X	X		
N1P	Unknown	1	2		X	X		
N1Q	Unknown	Unknown	2		X			X
N1R	CPS	4	2				X	X
N1S	Unknown	Unknown	1		X			
N1T	Unknown	Unknown	1		X			
N1U	Unknown	Unknown	1		X			
N1V	Unknown	2	1	X				
N1W ²	CPS	3	0					
Total: 23	-	-	-	12	19	15	12	15

1: Little/No experience

2: Experience Teaching CM

3: Experience Leading Workshops

4: Experience Leading Multiple workshops and engaged in PD

CPS: CPS teacher

FCPS: Former CPS Teacher

MGM: graduate of MGM program

² This teacher-leader did not attend any of the sessions in 2003-2004; however she became an experienced teacher-leader in 2004-2005.

The chart shows that MGM educated teacher-leaders on average attend more sessions (4.2 sessions on average) than CPS teacher-leaders (2.75 sessions on average). However, this may be attributed to the fact that CPS teacher-leaders have more experience on average with CM than MGM educated teacher-leaders (3.5 CM experience for CPS teacher-leaders versus 1.4 CM experience for MGM teacher-leaders).

The two tables below also reflect the documentation provided to us by the Connected Math Staff displaying the teaching background, CM experience level, and attendance of each teacher-leader during the 2004-2005 year. The table directly below only shows the new teacher-leaders who had not attended the teacher-leader training the year before (03-04).

2004-2005 New Connected Math Teacher-Leaders								
Teacher-leader Code	Teaching Background	Experience with CM	Attendance					
			Total	2-2-05	3-2-05	4-13-05	5-14-05	6-11-05
N2A	MGM	2	5	X	X	X	X	X
N2B	MGM	Unknown	4	X	X	X	X	
N2C	MGM	Unknown	4	X	X		X	X
N2D	MGM	Unknown	4	X	X	X	X	
N2E	SP	Unknown	3		X		X	X
N2F	MGM	2	3		X	X		X
N2G	MGM	1	2		X	X		
N2H	SP	Unknown	2		X	X		
Total: 8	-	-	-	4	8	6	5	4

1: Little/No experience	CPS: CPS teacher
2: Experience teaching CM	FCPS: Former CPS teacher
3: Experience leading workshops	MGM: Graduate of MGM program
4: Experience leading multiple workshops and engaged in PD	

On the whole, MGM educated new teacher-leaders attended more sessions (3.6 sessions on average) than the Specialist new teacher-leaders (2.5 sessions on average). Also, this shows that the majority of new teacher-leaders were MGM educated teachers.

For both 2003-04 and 2004-05, it looks as though the majority of the teacher-leaders were educated by MGM. This may guide the professional development of the teacher-leaders in a different direction than if the teacher-leaders went through a regular certification process (ie MGM teacher-leaders may need a bigger emphasis on classroom management and less emphasis on math content due to their backgrounds).

The table directly below displays the teaching background, level of experience with Connected Math and attendance rate of only the experienced teacher-leaders (teacher-leaders who had attended the teacher-leader professional development in 2003-04). The row at the bottom of this table indicates the total attendance at each of the workshops of the experienced teacher-leaders.

2004-2005 Experienced Connected Math Teacher-Leaders						
Teacher-leader Code	Teaching Background	Experience with CM	Attendance			
			Total	3-16-05	5-14-05	6-11-05
N1E	FCPS	3	3	X	X	X
N1J	MGM	2	3	X	X	X
N1F	MGM	1	3	X	X	X
N1M	MGM	1	3	X	X	X
N1W	CPS	3	2		X	X
N1R	CPS	4	2		X	X
N1L	MGM	2	2		X	X
N1D	CPS	4	1			X
N1I	CPS	3	1			X
Total: 9	-	-	-	4	7	9

1: Little/No experience	CPS: CPS teacher
2: Experience teaching CM	FCPS: Former CPS teacher
3: Experience leading workshops	MGM: Graduate of MGM program
4: Experience leading multiple workshops and engaged in PD	

On the whole, MGM educated teacher-leaders attended more meetings than CPS teacher-leaders (for example, nearly all MGM educated teacher-leaders attended the first meeting, March 16, 2005, whereas no CPS teacher-leaders attended this first session). MGM educated new teacher-leaders attend 2.75 sessions on average versus 1.5 sessions on average for CPS new teacher-leaders. The FCPS new teacher-leader attended all three of the sessions.

Regarding CM background, those who had little/no experience were the same people who had an MGM teaching background while those with experience teaching CMP were either present CPS teachers or a former CPS teacher.

Connected Math
Question 2: Teacher-leaders as Professional Development Facilitators

One of the goals of the teacher-leader training is to create more professional development facilitators. The bottom two tables detail who was selected to facilitate professional development. The tables outline the teaching backgrounds and experience levels with Connected Math of those who provided professional development. The table also shows the attendance rate in which the teacher-leader participated in teacher-leader professional development meetings.

New Connected Math Teacher-Leaders Teaching Professional Development 2004-2005			
Teacher-Leader Code	Teaching Background	Experience with CM	Attendance at 2004-2005 Meetings
N2E	SP	Unknown	3
N2C	MGM	Unknown	4
N2G	MGM	1	2
N2F	MGM	2	3

N2A	MGM	2	5
N2B	MGM	Unknown	4

New Connected Math Teacher-Leaders Not Teaching Professional Development 2004-2005

Teacher-Leader Code	Teaching Background	Experience with CM	Attendance at 2004-2005 Meetings
N2D	MGM	Unknown	4
N2H	SP	Unknown	2

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 1: Little/No experience
2: Experience teaching CMP
3: Experience leading workshops
4: Experience leading multiple workshops and engaged in PD | CPS: CPS teacher
FCPS: Former CPS teacher
MGM: Graduate of MGM program |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|

The tables show that 6 out of the 8 new teacher-leaders facilitated a professional development session during 2004-2005. Each new teacher-leader was paired with an experienced teacher-leader so that they could co-facilitate the professional development session. As implied in the Connected Math Staff Focus group, those new teacher-leaders who did not facilitate any professional development could be due to either the participant or the Connected Math staff feeling that leading professional development was not appropriate or suited to that person’s needs. A Connected Math staff person describes the process and goals of the teacher-leader process,

We [CM] looked at teachers we had worked with over the years and looked for people that we thought would be good in terms of being leaders because some of them were already leaders in their buildings even if it was unofficial and invited them to come to our leadership sessions with the understanding that we would go through several weeks over a period of months and talk about leadership and what that means and how that is involved in professional development etc. and at the end of that time there would be a mutual understanding between them and us as to whether or not they would be invited to help with the summer PD. So it wasn’t like just because you are coming here automatically you get to do PD and some chose and were right up front in saying “we don’t want to do PD but we want to learn some leadership skills” so that kind of started (Connected Math Focus Group, 2005).

While the partnership process is based on the experience levels of each teacher-leader; it can be presumed that it is also partially based on personality. As stated by a Connected Math staff person,

I guess part of it is that when you choose people that you know and I didn’t know these people personally but [another Connected Math staff person] knew a lot of them. You know, you pick people that you think are people people and are going to work with other people and are interested in the same thing so that part was not so surprising it actually did work out nicely (Connected Math Focus Group, 2005).

The finalized partnerships did reflect the partnership criteria in that the partnerships were composed of a new teacher-leader and an experienced teacher-leader. This process and

the resulting partnerships “did work out nicely”; no surprises or problems arose among the partnerships.

Connected Math

Question 3: Teacher-Leader Reflections

Responses from 4 teacher-leaders were overwhelmingly positive regarding their experiences in the Connected Math teacher-leader training. When asked whether the Leadership Training prepared them to be an effective leader, all respondents said “yes”. In describing the high quality of the training, all of the teacher-leaders stated that the trainers were wonderful resources. One respondent stated (and the other written reflections confirm), *...these training sessions are some of the best teacher staff development that is happening in Chicago* (Connected Math Written Reflection, 2006). Another respondent elaborated on the quality of the professional development specifically stating that one of the trainers was *a first rate instructor, and the ideal ‘people person’*. *She motivated us to come to meetings, work together, and provide first rate instruction. She manages the groups well and pairs us with other facilitators that complement our individual style of teaching* (Connected Math Written Reflection, 2006). Another teacher-leader similarly complimented the high quality of the trainers in stating *The trainers were very well versed in math content. I appreciate the extensive modeling that was done by the trainers. They modeled procedures, facilitations, behavior, and they showed us how to be present within a group without being intrusive (hence, facilitating instead of teaching). They also went above and beyond in service-ensuring that we had all materials and that questions were answered. Our trainers followed up with us after each math workshop to reflect and brainstorm* (Connected Math Written Reflection, 2006).

All four of the teacher-leader respondents proclaimed the effectiveness and high quality of the teacher-leader professional development that they received from Connected Math.

Three of the predominant concerns from the teacher-leaders included (1) more time for discussion among teacher-leaders, (2) strategies to address reluctant participants and (3) addressing whether the teachers are using CMP1 or CMP2. Regarding time, the teacher-leaders stated, while understanding the severe time constraints, that more time is necessary for discussion. One teacher-leader stated,

There is so much to do for the trainees to plan their workshops, but I have always felt the most beneficial time has been devoted to a discussion by these committed educators about mathematics concepts and/or our instructional practice. If we could continue discussions along these lines, if time permits, we would all grow professionally (Connected Math Written Reflection, 2006).

Another teacher-leader corroborated the above sentiment in stating, *I would like to see more time spent in discussions...maybe there could be an opportunity for current instructors to discuss reoccurring issues with presenting to CPS teachers* (Connected Math Written Reflection, 2006). While time is scarce and a constant issue in professional

development, these teacher-leaders think that they could benefit from extra time spent on discussion during the professional development sessions.

Another common suggested improvement is having the professional development spend time on including strategies to address reluctant teachers in professional development sessions. One teacher-leader stated,

I would have liked more time discussing problems with reluctant participants, a lack of core knowledge on the part of those we instruct, and perhaps a plan of action for said cases. I expect certain deficiencies from students but found it difficult dealing with math instructors that knew so very little about mathematics. Admittedly, there might not be anything that leadership training can provide to combat the lingering issue (Connected Math Written Reflection, 2006).

Similarly, another teacher-leader felt that the professional development should provide strategies for addressing reluctant teachers. This teacher-leader echoed the previous teacher-leader's thoughts in stating,

I wish that the Connected Math Leadership Training focused on how to effectively work with uncooperative teachers (how to accentuate the positive when teachers are giving you the negative). This only happened once or twice, and was quickly taken care of, but I would like to learn these management techniques for future workshops (Connected Math Written Reflections, 2006).

While having many reluctant participants in the professional development session does not seem to be a very widespread issue, having the knowledge and the skill to address such participants, when they do voice their negative perceptions of the curriculum, seems like it would be a useful tool in facilitating professional development. Providing strategies to address reluctant teachers may not need to be an extensive or time-consuming feat but rather a concise and brief dialogue during the teacher-leader professional development session offering some suggestions on how to address these teachers.

Two of the four written reflections referenced the disparity of which version of Connected Math the professional development teachers were using: CMP1 or CMP2. As stated by one teacher leader,

With the introduction of a second version of CMP known as CMP2, the trainers provided a very useful document to see the changes with CMP2. It might be helpful to have a comparison, by title of what CMP1 and CMP2 have, especially as we start to get more and more sessions with half the attendees teachers using one version and the other half using another version (Connected Math Written Reflections, 2006).

Another teacher leader written reflection similarly implied that teachers in the professional development varied in which version of the curriculum they were using. As a solution to this problem, this teacher leader suggested *Polling the participants about the books at their schools, CMP1 or 2 (Connected Math Written Reflections, 2006)*. Both of these teacher leaders offer suggestions (polling or a comparison guide) to address which

version of the Connected Math curriculum their teachers participating in the professional development are using.

**Connected Math
Discussion Questions**

- (1) Considering the scarce resource of time, how can more time be allocated to for discussion among the teacher-leaders during their professional development?
- (2) Reflecting upon the suggested improvements of including strategies to address reluctant teachers, how can this be integrated into the teacher-leader professional development sessions?
- (3) How can teacher leaders effectively address teachers during professional development sessions even though the teachers may be using different versions of the curriculum?
- (4) Considering the predominant background of the teacher-leaders as MGM certified, how does this affect the teacher-leader professional development?

Conclusion

The Developing Leadership to Sustain Change (DLSC2) project achieved its goal of training a cadre of teacher-leaders who were able to train additional teacher in Math Trailblazer and Connected Math workshops by summer 2005. Ten of the 22 summer Math Trailblazer professional development sessions in Chicago were co-taught by the new DLSC2 teacher-leaders. Of the 8 DLSC2 teacher-leaders trained in Connected Math, 6 or 75% of them co-taught summer professional development sessions.

The DLSC2 leaders also gained perspectives on how to improve their support and training of teacher-leaders. Among the lessons learned was that in the more successful pairing of co-instructors for professional development, the personality of co-instructors mattered as did the provision of adequate time for discussion between co-instructors and their development of structured written lesson plans for the workshops. In addition, Math Trailblazer teacher-leaders identified the need for more examples of classroom implementation to share in their workshops. Connected Math teacher-leaders indicated that additional strategies were needed on how to work with teachers reluctant in using the new curriculum.