

# Faculty Professional Growth Summer Project Final Report Draft

Use this Word template to compose your responses to questions that are part of the new online summer project application form, and take advantage of spell checking. You can then cut and paste this to the online system.

Do not bother with fancy formatting as none is preserved in the online form.

## Summer Project Title

The Investigation of a Professional Learning Community for Mathematics Instructors

## Abstract

Write a concise summary with descriptive information about your project, location, time span, your relationship to it, etc. Include specific information-- since you have completed your project, your knowledge is valuable and can be shared with your colleagues (200 word limit).

This project describes the experiences of local secondary math teachers in a professional learning community over one school year. Trey Cox, facilitator of the community, analyzed the data and wrote up conclusions as to the findings of the study. The research consisted of analyzing audiotapes of each learning community meeting, clinical interview transcripts, and the written work that the teachers completed. The focus of the analysis was on the ways in which the professional learning community impacted the participants' mathematical content knowledge, teaching methods, and beliefs about the nature of mathematics. Additionally, the data was analyzed with an eye toward making improvements to the professional learning community structure so that the implementation of future iterations will be even more successful.

## Outcomes

In a paragraph or two describe what worked well. Did you accomplish your objective(s)? Were you able to complete your summer project as written? If not, what did you modify and why? What did not go as well as expected, if anything? Were there any surprises? **Note: Use the questions as guides for your outcomes. Do not include detailed list of workshops attended, speakers who presented, or a list of items you have seen, heard, or read.**

What worked well with this summer project was that it was found as expected that participants enjoyed the opportunity to work collaboratively with their colleagues at their own school site. They appreciated the fact that they were sharing their professional experiences with respect to similar students and the same curriculum. This is partly what distinguished this professional development model from others they had done. They discussed vertical mathematization (math throughout different math levels in the school) and horizontal mathematization (math in other disciplines and arenas of application). It was apparent that their content knowledge deepened also by the discussions they had and the pre and post test they took. It was also apparent that they accessed their system of beliefs regarding the nature of mathematics and how it should be taught. The participants appeared to use their beliefs as a filter through which the discussions passed and also for what they decided to actually implement into their classrooms.

The meshing of teacher personalities constituted a problem in that two individual teachers were more domineering and two were more reserved. It took skill to try and get all to participate equally and to honor and respect each other's input. Another challenge that arose was the teachers' feelings toward mathematics education research. They unanimously expressed their distaste for it because of the nature in which it is written. It needs to be practitioner based but they perceived it to be written for an audience of other university level researchers.

The project went very well as expressed by post implementation interviews clearly showed but a need arose and that is for a map to show what the ultimate goal is for one of these learning communities. It is now my hope to try and create such a map or framework next summer so that facilitators, participants, and researchers can all use it to guide their work.

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**Professional Growth**

Your own professional growth is a large part of your project. Your professional growth is important to you, your students, your college, and possibly other colleagues. How did project affect you professionally? What skills did you learn? What environments were you working in and how might your summer project influence your teaching or other responsibilities? Did you gain a different perspective? Was it professionally valuable for you?

I grew professionally in many ways. One that was unexpected was how much it helped my own teaching be more focused on what is important. Having so many discussions on what constitutes good mathematics instruction had the effect of being imbedded into my thought processes as I taught my summer classes.

It also made me even more keenly aware of how hard and intricate our job is as mathematics instructors. Being a teacher of a subject that is so strongly disliked makes it even more challenging to get students actively involved in their learning. However, through this work with other teachers I saw again the benefit of sharing ideas from personal experience and the research.

As facilitator of the learning community it made me realize I need to work more on leading group dynamics. As the year went on, I got the participants to defend what they do in their classroom and to ask tough questions about what, why, and how they teach mathematics.

I am even more committed to this model of professional development now after seeing the results and working so closely for a year with other mathematics instructors.

**Dissemination**

How will you share this information with your colleagues, department, students, or campus?

I will now share my results by making a formal report to my Math Department. I have also been chosen to speak at the NCTM conference in Spring 2005 and an ASU Research conference in Fall 2004. I have notified the marketing and public relations office of my college to let them know what I did and am waiting for them to tell me how I can most effectively communicate to the local community about my work.

In addition, I have already had informal talks with colleagues who were very interested in my findings. I know that it already has and will continue to change my instruction of students.