This paper describes the professional development team (PDT) concept, reports results of a study of the development and year-long implementation of a PDT, and describes the effects of the PDT on school personnel and on subsequent implementation of a professional development school (PDS). The PDT is presented as a viable option for improving K-12 education, research, professional development, and teacher education through school-based interprofessional teams. The PDT that was studied was located in a middle school and consisted of four teachers, one university professor, five student teachers, and two methods field experience students. PDTs have many of the same goals and functions as PDSs; however, PDSs are generally schoolwide efforts rather than efforts that involve only one team of students, teachers, and college faculty. PDTs can serve as a stepping stone to PDS implementation, as well as a viable alternative if a more extensive PDS relationship between a school and a college is not possible. Data sources for the study included surveys of students and parents; participant observation; and interviews with team members, school administrators, and other education professionals. Results indicated that the teachers, students, preservice teachers, and college professor who were associated with the team perceived positive outcomes from the PDT's presence. Among the positive outcomes was the perception by school and college personnel that the PDT's existence laid the foundation for the school's becoming a PDS. Also discussed are some of the negative reactions to the PDT. (IAH)
This paper introduces the concept of professional development teams (PDT), a smaller scale version of professional development schools (PDS), as a viable option for improved K-12 education, research, professional development, and teacher education. In it we will: 1) describe the professional development team concept; 2) report research of the development and year-long implementation of a PDT in a middle school with a team of four teachers, one university professor, five student teachers, and two methods field experience students, and 3) describe effects of the PDT on others at the school and subsequent PDS implementation. Specific research questions addressed include:

1. How does a PDT affect the involved classroom teachers, pre-service teachers, students, and university professor as well as the research undertaken by both teachers and university professors?

2. What unplanned effects does a PDT have for those directly involved as well as others in the school?

3. In what ways can professional development teams fulfill (and not fulfill) the intent of professional development schools?

4. How does a PDT affect subsequent PDS development in the school?

Perspectives or Theoretical Framework

The concept of a Professional Development Team is presented here for the first time, although it has its roots in the many years of experience with and growing body of literature.
about professional development schools (Abdal-Haqq, 1989, Holmes Group, 1990; Murray, 19xx, National Center for Restructuring Education, Schools, and Teaching [NCREST], 1993). PDT's fulfill many of the same functions as professional development schools but, rather than being school-wide, involve one team of teachers and students and often only one university faculty member.

Three major foci of professional development schools are: to improve education of prospective and practicing teachers; to strengthen knowledge and practice in teaching; and to strengthen the profession of teaching by serving as models of promising and productive structural relations (Abdal-Haqq, 1989). Commitments that lead to these ends include:

1. Centering schools on learners and learning -- PDSs should develop a shared, publicly articulated vision and commitment to a set of core beliefs that apply to all learners....

2. Communication and collaboration -- Teaching and learning are not isolated work. They require many opportunities for communication and collaboration among learners - adults and children....

3. Connection and community -- Since individuals learn more effectively when they learn together, communities of learners must be forged within schools and across traditional school/community boundaries....

4. Commitment to developing knowledge and promoting inquiry -- Members of the PDS community are engaged in systematic, collaborative, and continuous inquiry about teaching and learning....

5. Shared responsibility for the learning of all members of the PDS community -- Everyone on the joint school and university faculty assumes a collective professional responsibility for the welfare of all learners (students, novice teachers, veteran teachers, teacher educators, administrators)....
6. Parity in partnerships -- PDS partnerships are forged with a commitment to mutual trust, respect, and parity resulting in reciprocity and collective ownership of the enterprise....

7. Continual renewal and improvement -- The PDS as an organization and members of the PDS community are committed to continual reflection, self and organizational renewal, and the pursuit of ever more powerful and inclusive approaches to supporting student success. (NCREST, 1993, pp. 3-4)

PDT's, like PDS's, make these same commitments but on a smaller scale. University personnel and team members work collaboratively in professional development, improving education for both K-12 students and pre-service teachers, and in research of interest to both the team and university educator. PDT's can be used as a stepping stone to full professional development school status, serving as a pilot and demonstration for both the K-12 school and the School of Education. This intermediary step is particularly useful if there are limited numbers of people available or if the entire school or School of Education is not yet willing or ready to commit to a PDS relationship.

PDTs can also serve as "the next best thing" to PDS if the more extensive PDS relationship is not a possibility. The PDT provides a model for others in both the school and School of Education to consider while allowing teachers, university faculty, and pre-service teachers interested in this approach to professional development to pursue it without pressuring others not similarly interested.

Methods

Description of Setting and Study

In this study, the teaching team and university faculty member first came together through an innovative professional development approach sponsored by a consortium of small school districts. The Ohio Valley Education Consortium invited groups of teachers to identify an area of interest for professional development and put them in touch with potential consultants, usually university faculty members. Teams submitted proposals for either study group grants or
demonstration grants, each of which provided up to $900/year for release time, materials, consultants, etc. to further professional development in their self-identified area. The middle school team described here applied for a study group grant to investigate teaming, interdisciplinary teaching, effective methods for working with a diverse group of students, and authentic assessment. The first author agreed to serve as their consultant. Upon receiving the study group grant, they worked collaboratively through spring and summer of 1992, and successfully applied for a demonstration grant for the following year to implement what they had planned. What began as a not uncommon instance of collaboration evolved into something much more extensive. It was this experience that prompted the first author to name and describe the concept of professional development team.

The team included four middle school academic teachers, one special education resource teacher, and a professor at a nearby university who had expertise in middle school and gifted education. The school of about 600 students is located in a small town near a mid-size city in the upper South. The team in this study had approximately 116 sixth grade students, including all identified gifted students and all mainstreamed students with learning disabilities at that grade level, most of the academically at-risk students (identified by the feeder elementary schools), and the balance (about 50%) non-labeled students. The team's goal was to implement curriculum and instructional techniques consistent with middle school philosophy and the Kentucky Education Reform Act (KERA), as well as provide challenging and appropriate curriculum and instruction for all students in a mostly heterogeneous environment. Middle school philosophy calls for an interdisciplinary team organization of teachers sharing the same group of students, integrated thematic instruction, affective and exploratory components in addition to academic ones, and heterogeneous grouping, among other things. The elements of KERA relevant to the team's efforts include authentic assessment (portfolio assessment, rubrics, performance tasks, open-ended questions), thematic instruction, and using and applying knowledge.

The grant project took place over the course of a year and a half, with the first semester and summer spent planning and the following year implementing the plans. There were on-going
meetings among the teachers and the consultant in fulfillment of the study group goals. The consultant provided resources in the form of articles, summaries of research, recommendations for books, information about conferences, and ideas and reactions regarding team and teacher plans. In the implementation year, she arranged for the placement of several pre-service teachers on the team (two student teachers in the fall semester, three in the spring, as well as two methods course students in the spring). She participated in team planning meetings at and outside of school and spent approximately one day per week with the team, observing, talking with teachers and students, occasionally co-teaching, and supervising student teachers and methods field experience students.

The teaching team spent many hours discussing philosophy, identifying individual needs of its members, and setting goals. Specific goals were the initiation of the advisor-advisee program, development of integrated thematic units, inclusion of performance-based assessment measures, and re-design of the gifted program to relate it more closely to the team's thematic units. Team members read materials on all these aspects of middle school teaching, visited teams at other schools, and attended workshops and conferences to re-educate themselves on middle school philosophy. With the guidance of the consultant, they created a design for the team which was implemented in the fall. The teachers involved spent considerable time teaching, discussing, and revising the initial plan. Successful teaching strategies were shared with each other, and new teaching and teaming strategies were developed.

Research Method

The research method was qualitative, involving participant observation and interviews. The first author was with the team one day per week, while the second author, as team leader, was there all of the time.

Data Sources

Data sources included: field notes and reflections from the team leader's and university faculty member's observation of and participation in team planning meetings, class interactions, and personal conversations; formal interviews conducted at the end of the school year by the
university faculty member with the four academic teachers; surveys of all students twice during the year along with interviews of six identified gifted students at the end of the year; parent surveys; and documents related to the professional development, planning, research, and pre-service teacher education functions. In addition, other interviews were conducted with school administrators, pre-service teachers working with the team, the School of Education dean, the university coordinator of PDS and other reform efforts, and the consortium professional development liaison who had funded the grants and was knowledgeable about the PDT.

Results and Discussion

Through the university professor, teachers had access to additional resources (books, articles, information about strategies, research, the experiences of others, etc.) in support of their professional development goals. She was able to connect teachers with other resources at the university; including materials, information, and people. Her knowledge of current research as well as her experiences with different middle schools provided ideas for consideration by the team. For example, the team adopted a system for grouping and rotating students that the professor had used in her previous teaching experience. Because of her semi-outsider role and personal and professional experiences, she provided a different perspective on particular students. In a very practical sense, she was an additional adult in the room, able to co-teach, work with students, and sometimes just cover the class while a teacher went to the bathroom.

The PDT provided personal and professional support as we explored new areas. In addition to the feeling of collegiality -- "We're in this together" -- was also a validation -- "We're on the right track." Several teachers mentioned in the end-of-year interviews the value of group planning and the support system provided by the PDT. One said, "I learned a whole lot about working with others, compromising. It was a benefit to work with other people, get ideas from others." Another felt it was a challenge to do what no one else was doing with respect to teaming, integrating instruction, A-A groups, and performance assessment.

PDT offered the opportunity for new roles for teachers in planning and participating in research, making conference presentations, and co-authoring publications. Teachers also became
role models and mentors for several pre-service teachers, a new role for some of them. They were introduced to new methods via the pre-service teachers' participation on the team.

One of the administrators observed that for teachers there was a lot of professional growth. "A lot they thought could happen with teachers and kids did happen." Several teachers mentioned growth in planning and teaching integrated units and designing performance assessments. One teacher felt she grew a lot in her perceptions of special education students. "I saw what they could do in a different setting. Working in heterogeneous groups with a collaboration teacher helped me see they could accomplish the same things as other students."

Team teachers also attributed much personal growth to the PDT experience. "I'm a much more positive teacher. I give pats on the back more freely... They taught me how to be a person." It was the first time the team leader had been in the role of leading peers, one she fulfilled with skill and good cheer.

When asked about the role of the professor in the PDT, one said, "It was nice having you here. Lots of times we were unsure, but felt we could ask you and you'd let us know if you thought it would work or not... You have some really good ideas." Another echoed these sentiments, "You were a great resource for a lot of things. Sometimes we'd get stuck. You provided an outside perspective, research, plenty of ideas, a different schedule. You helped a whole lot with the student teachers." "You kept us on task. Your knowledge of research and what's working was useful. You provided ideas of what to try and how to do things differently. Excellent student teachers didn't hurt either." When asked directly if the professor's involvement had interfered with the team's work, all of the teachers disagreed. "At first I thought [university] people would be a bother and that I would feel nervous. [Your participation] made us want to stay on our toes and make sure the activities were good."

Pre-service teachers reported greater comfort levels with the university professor who served as their supervisor. They attributed this to the fact that they saw her at the school each week instead of the two or four observations per semester norm for methods block and student teaching supervision respectively. Asked why she had requested this placement, one said, "I felt
like I was going to get more feedback with you being out here. I knew that you would be here each week." Another said, "[Your being here] was a connection to [the university]. We were not cut off like in my previous field experience. You were not just here twice to observe. You could help us while we were doing it."

The supervisor was in and out of classes continually, so the pre-service teachers became accustomed to seeing her in the room. As a result, the formal observation were not as novel a situation for either the pre-service teacher or the students in the class, resulting in a more authentic observation experience. Pre-service teachers also expressed comfort knowing that the supervisor was familiar with the students and the context in which they were working. One said, "You know the teachers and kids so well. You have a better understanding of what is going on in the classes." For these reasons, feedback from the supervisor also had more credibility.

Pre-service teachers also observed teachers reflecting on their own teaching and ways it could be improved; which ultimately led to their own reflection on practice. While good teachers in many settings do this kind of reflection, it is rare that it is done as regularly and publicly as in the PDT. We feel this results from the PDT's overt commitment to reflection, risk-taking, and professional development along with the non-judgmental and growth-oriented atmosphere created by all participants. One of the pre-service teachers observed that, "It's less threatening [for me] if they're helping develop each other because that means they recognize there are places to improve themselves, so it's not just me that needs improvement."

Pre-service teachers also participated in a very extensive planning process and were exposed to planning that incorporated research-based practice. The PDT met during their planning period twice a week, with the professor attending once a week. In addition, there were several lengthy meetings at members' homes on weekends and evenings to which pre-service teachers came. One said, "They included us from the very beginning, let us come to the meetings. This made us feel like teachers, unlike other student teachers who were allowed to do what they needed to do but felt they were treated like subs." The team meetings were used to plan thematic units, discuss issues and materials people had been reading, and assess how well
the team was functioning. These meetings served not only as reinforcement of what the pre-
service teachers were learning at the university, but also as a model of professional development
as an ongoing process for good teachers. One pre-service teacher observed that teachers'
commitment to professional development suggested to her that teaching on that team "would be
very similar to what I was learning at [the university] and there would be more consistency."
Another said the team was, "doing more KERA than I'd ever seen. Teachers were willing to try
things, and if it didn't work, they'd do something else. There was no fear of being humiliated or
failing."

Sixth graders were involved in learning experiences that resulted from research on "best
practice" -- active, hands-on learning, writing across the curriculum, authentic assessment,
thematic instruction, affective education, etc. While the teachers undoubtedly would have
implemented some of these practices without the PDT, those involved feel the PDT supported a
more extensive implementation, at a higher level, than would have occurred without it. Teachers
attribute this to their commitment to the team's goals, the time spent in reading, planning,
reflecting, and discussing ideas, and the input and feedback of the university professor. School
administrators agree and feel the participation of pre-service teachers also infused new ideas.
Students participated in planned integrated thematic instruction throughout the school year.
Integrated units, most of which lasted from three to eight weeks, were organized around the
following themes: similarities and differences; elections; patterns; multicultural; careers/hobbies;
interdependence; and the future. The university faculty member's expertise in gifted education
complemented that of the teacher in coordinating the independent projects done by students in the
daily 40 minute gifted class with the thematic units of the team. This resulted in a less disjointed
curriculum as well as a more challenging focus for gifted students as they participated in the team
unit.

Students also benefited from a planned Advisor-Advisee program designed to facilitate
affective growth in such areas as interpersonal relationships, goal setting, responsibility, self-
exploration and self-definition. These groups also serve as a vehicle for students to be known
well by at least one adult in the school. As no other teachers in the building were participating in (or even contemplating) an A-A program, the team's program served as a model for others to consider.

The additional people involved with the team (two student teachers full time in the fall and three in the spring, two methods students two days a week for one semester, and the university faculty member one day a week all year) increased the number of adults with whom students could interact. In a concrete way, this gave them more access to help in the classroom as well as alternative explanations and demonstrations. It also provided a greater number of role models for the students. Because the pre-service teachers and university faculty member were very aware of developmentally appropriate methods, both students and team teachers had access to additional curricular and instructional resources as well. Students indirectly benefited from joint professional decisions regarding the best ways to handle individual problems and needs of the students in both academic and non-academic areas.

The university professor gained in many ways as well. Her personal and professional growth was enhanced by the reality check of being in a classroom on a regular basis, participating in the intersection of theory and practice. The experience provided stories, examples, slides, and illustrations for her university class, Teaching in the Middle Grades, as well as for inservice workshops and presentations she gave. She gained credibility with her university students, who always want to know how recently professors have "been there." She was also able to provide a real-world connection for her university class through a semester-long pen pal relationship with one class on the PDT. Because participation with local schools and support of statewide reforms are valued at her university, she gained credibility with her colleagues, which increased as the School of Education got involved in professional development schools.

The university professor gained access to a research site, where she was able to conduct research of interest to her and the team. This has resulted in three national presentations.
(including this one!) and several articles in various stages of readiness, all completed collaboratively by the team leader and university professor.

One of the most valuable outcomes was her ability to coordinate the teaching, research, and service responsibilities of her job in a time-efficient and mutually reinforcing way. She supervised pre-service teachers and conducted research at the site, used what she learned there to enhance her teaching on campus, and used her expertise to provide service to the team. In this time of multiple demands on professors, PDTs and PDSs can provide a way to "bring it all together" in cases where the professor and team/school have shared goals.

Effects of the PDT on Research

The research undertaken as part of the PDT reflected real issues and questions of importance to the team as well as the researcher. In this particular case, both the team and the professor wanted in general to document the team's reform efforts and in particular to investigate the effectiveness of these middle school and KERA reform efforts for gifted, learning disabled, at-risk, and non-labeled students operating in a primarily heterogeneous setting. This is an issue of great importance to the education community in light of current discussion of "de-tracking" and full inclusion of students with disabilities.

To pursue the latter study, we surveyed all students on the team, once in January and again in late May. We had an additional page of the survey for students identified as gifted, asking more specific questions about academic and social-emotional issues. The professor also conducted interviews with the six students teachers considered most gifted. We surveyed parents of all students on the team in May to gain their perspective about many of the innovations the team had implemented and their perception of their child's school experience that year. In addition to the year-long participant observation and informal conversations involving the professor, she also conducted in-depth interviews with each of the academic team teachers.

During the PDT year we began a study of the effects of participation in the pen pal relationship for both sixth graders and university students. We also anticipate writing articles about integrated instruction and differentiating curriculum and instruction within a thematic unit,
using the team's work as examples. This research fulfills PDS goals by addressing questions of interest to the immediate school setting as well as serving to inform professional practice.

Unplanned Effects of the PDT

One of the student teachers from the implementation year has now been hired full time on the PDT while two other student teachers (of the five) were hired by other districts early in the hiring process. The two methods field experience students expressed strong interest in being placed with the team for their student teaching, though this was discouraged by placement policies that encourage students to experience several different school cultures in their field experience. Positive word of mouth has spread about the team via pre-service teachers who have been there and the university professor who uses examples in her introductory middle school class, and several students have expressed interest in being placed there in the future.

In December of the implementation year one of the team teachers expressed interest in learning more about how to meet the needs of gifted students in a heterogeneous setting. She and the professor planned an independent study course in which she read independently, discussed and planned with the professor when she was on-site, and experimented with several new methods in her middle school classes.

As mentioned earlier, multiple joint publication and presentation submissions have come about for teachers who previously had not been involved in those activities. One of the teachers had been involved in providing professional development experiences to other teachers, but her opportunities for involvement on a district, regional, and state level increased tremendously during and after the PDT year. Other teachers on the team became more active professionally as well. The district supported the team leader to attend a national professional conference to make a joint presentation about research done with the team, a rare occurrence in this district.

Another unexpected and very welcome outcome was a powerful personal and professional support system for the teachers and university faculty member in a year that was stressful due to circumstances unrelated to the PDT. We came to rely on each other in ways no one expected but all valued. Several team members experienced significant life-altering events in the
implementation year, both positive and negative, and were nourished and sustained by the individuals and sense of community in the PDT.

The PDT teachers came to be seen as resources in the building by other teachers starting to implement teaming, integrated instruction, and performance assessment. In the implementation grant, we allocated money for a substitute teacher to cover the classes of teachers in the building who wanted to visit the team and talk with the teachers. All time slots were taken, with some other teachers choosing to come on their conference hours instead.

The professor being on-site on a regular basis also allowed for informal discussions about ideas for school improvement among the professor and school administrators as well as informal talk among the professor and other teachers about university courses, advising issues, and ideas for their teaching. One of the non-PDT teachers in the building enrolled in two courses taught by the professor, and they subsequently planned and carried out research based on ideas from one of the courses. The professor was also asked to be a consultant for another team's proposal for a demonstration grant for the coming year, which was funded and is now being carried out.

A less positive outcome that was discovered through interviews for this research was the resentment and lack of understanding about the PDT on the part of some teachers in the building. The PDT members had chosen to adopt a low profile in an effort not to appear to be "showing off" and therefore did not communicate much formally or informally with other teachers about their grant applications and activities. Teachers' responses included, "I didn't know why you (the professor) were here. Why them and not us? I didn't know how it ended up. A report would have been nice." Others on the school faculty saw the university faculty member spending time with the team on a weekly basis and the placement of pre-service teachers only on that team. "There were a lot of misunderstandings. [The faculty member was] there to help them and there were lots of student teachers. There was lots of resentment -- no wonder your kids do well, with all those adults in the room." Another said, "There was a twang of jealousy. I wanted what you all were doing."
A bit of history may shed light on these reactions. Previous culture in the school had not been supportive of innovation or teachers who got recognition for activities beyond the classroom. Further, two teams had approached the previous principal in the spring of 1992 about teaming. He made it clear that only one group would be allowed to pilot the team concept and chose the team that had applied for the grant. In light of these things, the PDT teachers felt it best to adopt a low profile. Some of them now feel that sharing information about the PDT's work would have fed existing resentments, while others felt teachers wouldn't have been interested anyway.

Placement of pre-service teachers, time spent by the university professor, and involvement with university students were the elements of the PDT most visible to others in the school. These appeared to be valued both for their intrinsic assistance and as a validation of the teachers involved. This awareness on our part has led to a conscious expansion in all three areas in the year following the PDT. The pen pal project now involves a class from a new team, the professor is planning and meeting with teachers on two additional teams on a regular basis, and pre-service teachers have been placed on four of the five teams in the school.

To What Extent Did the PDT Fulfill the Goals of PDS?

In the planning and particularly in the implementation year the PDT appears to have fulfilled several of the PDS goals articulated by NCREST and listed earlier in this paper, although at a team rather than a school level.

1. Centering schools on learners and learning -- Though the team did not develop a publicly articulated vision and commitment to a set of core beliefs that apply to all learners, such a vision did seem to drive their planning and instruction. Their use of heterogeneous grouping most of the day and commitment to a challenging curriculum for all students, along with management and record-keeping strategies that kept them aware of students' status, reflect a commitment to the belief that all students can and should learn at high levels.
2. Communication and collaboration -- Team planning and sharing in formal and informal settings did fulfill this goal, making teaching a much less isolated endeavor than it had been in the past. Pre-service teachers and the university professor were included in such communication and collaboration, involving them in professionally and personally rewarding relationships.

3. Connection and community -- The team concept, new to this building in recent decades, certainly created a sense of community for the students and teachers. This sense of community also contributed to the richness of the pre-service teachers' experience.

4. Commitment to developing knowledge and promoting inquiry -- Teachers and the university professor engaged in continuous informal reflection and inquiry in addition to the study group learning of the first year and the more formal research conducted in the second year.

5. Shared responsibility for the learning of all members of the PDS community -- Team teachers and the professor were very involved in mentoring pre-service teachers. All adults worked to improve students' learning through direct interaction, planning, and reflection about practice. Team teachers learned through their own reflection, their reading about and observing new practices, and interactions with the professor. The university faculty member learned by talking with and observing excellent teachers in action and helping implement research based practices in a real school setting.

6. Parity in partnerships -- Mutual trust and respect was very much in evidence on the PDT, with ideas shared, accepted, challenged, and modified by all participants. In particular, pre-service teachers were treated as peers, given responsibility, and expected to participate fully.

7. Continual renewal and improvement -- While the teachers had been reflective before the experience, the structure of the PDT allowed for greater growth and a more explicit
commitment. This renewal and improvement has been continued by the team in the current year, when the faculty member no longer spends as much time with the PDT due to her expanded role as PDS liaison with the school.

Impact on PDS Development the Following Year

Interviews about this question were conducted with non-PDT teachers, building administrators, and several faculty/administrators at the university who participated in PDS discussions, planning, and decision-making. The consensus was that the PDT played a large role in the invitation to this school to explore a PDS relationship, the school's decision to accept the invitation, and the initial success being experienced in this first year of PDS planning. "PDS wouldn't have happened without it," said one.

University's interest in the school as a PDS. The fact that the faculty member had made a long-term and time-intensive commitment to the PDT and was willing to continue that relationship with the PDS was seen as important. She "went to bat for [the school]" and was able to convince university people about the appropriateness and interest of the site in exploring PDS status. It seemed important that the faculty member already had a relationship with the school in which both the school and university had confidence. "It was [the faculty member's] investment and advocacy that made a difference. Once the dean knew you had been out there and knew things were going well," he was more supportive. This could also be said for faculty colleagues involved in the decisions about PDS invitations. Several people agreed that it would have been highly unlikely that the school would have been invited to explore a PDS relationship had the faculty member not been involved with the PDT.

School's interest in PDS. Building administrators saw PDS as a way to enhance reform efforts already underway. They were very supportive of the direction taken by the PDT, noted the interest of other teachers, and saw PDS as a way to increase resources to support that growing interest. They were pleased with the pre-service teachers who had worked with the PDT and welcomed any opportunity for more qualified adults to work with students. "Other teams started to see the benefits of additional adults (university faculty member, pre-service
teachers), new ideas, other opinions. Some things were happening with the [PDT]. The team concept attracted people. The fringe benefits of being a team were appealing -- common planning time, additional adults. They saw that working as a team made it easier to apply for a grant and gave the grant more appeal." Administrators also liked the update on new methods that came from new people in the building and the increased number of ideas for lessons and innovations that they saw coming from the university faculty member and the pre-service teachers. They felt bringing college students into the classroom added variety to the day.

Teachers who were not part of the PDT had mixed reactions. As mentioned earlier, there was some jealousy of the resources available to the PDT. But for many, "[i]t piqued interest in how to get [university] students in your room." Teachers had a chance to watch from a distance what was happening on the PDT before making a commitment to explore PDS. A non-PDT teacher said, "I was more willing to stick my head out of the door. I could get to know you on an informal level, which made it less threatening. . . . I saw what you did with the team and had more confidence in you. . . . I have confidence with you as an educator cause I've seen what you can do with kids and with the teachers on the team."

**District's interest in PDS.** Though district administrators were not interviewed, others involved in the conversations and decision making felt several factors influenced their interest in exploring a PDS relationship. "They saw it not only as positive for the school but were happy for the district. This was pretty welcomed." The district saw PDS as an opportunity for the school and district to pull university resources in for help. They were interested in having additional resources, one of which was the faculty member working with the PDT (who had also done inservice presentations at a few other schools in the district). Like the building staff, they also welcomed the additional resources provided by pre-service teachers, who they felt were well prepared and of high quality.

A university administrator felt that "the principal impetus [for PDS] came from the work [the faculty member] did at the school." Her involvement with the school was known to district administrators involved in the decision. Another factor mentioned in the district's support for
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PDS was the strong commitment on the part of both building administrators, based in large part on their experiences with the PDT.

The investment of time in the PDT re-established some credibility for the university with district personnel. "There had been a coming and going with [the university] in the past" and the PDT appeared to signal a new era of greater commitment to that school district.

In addition to the work done in the PDT, district interest in PDS seemed to stem from the overall quality and direction in which the school itself was moving. "Teachers on [the PDT] are respected by the building administrators, who shared that with others in the district." Another felt that a district level administrator saw the school as a place where things are happening that need to happen elsewhere.

Impact on Current PDS Activities

A major impact on the success of PDS explorations this year has been the level of trust and credibility built by the university faculty member during her previous year and a half with the PDT. Several teachers agreed that "now people see you and know you and are more willing to talk with you." An administrator noted that seeing the university faculty member working with the PDT gave people more sense of the purpose of a PDS. They saw that "her purpose was to enhance what we were doing, not evaluate" and that this was not a case of the university wanting to come in and do something to the teachers. One teacher now active in PDS discussions said, "PDT was an excellent stepping stone for this faculty. If you had just waltzed in here I don't know how this faculty would have reacted. You snuck in through the back door. I think it was a bridge."

The work accomplished on the PDT has also served as a model for others in the school interested in similar goals. During the PDT implementation year there were only two interdisciplinary teams operating in the building; now all teachers work on teams, a total of six this year. School administrators said, "Your personal involvement with that [PDT] team were first steps toward further teams developing. It was contagious." "Teachers were more willing to team. They lumped that (university involvement in PDT and teaming) all together."
The university faculty member's familiarity with other teachers in the building and the relationship built with the principal has led to candid discussions about expanded placement of pre-service teachers, who this year are involved with three teams in addition to the PDT. As mentioned earlier, the pen pal relationship with university students originally done with the PDT has moved to a different team and the university professor is conducting collaborative research with a teacher on yet another team about the impact of differentiating instruction around learning styles on students' attitude and achievement in mathematics.

Trying to ascertain the influence of the PDT on the teachers involved and the rest of the school is a challenge. These were good teachers -- using developmentally appropriate instruction, self-directed, and committed to personal and professional growth -- long before the university professor arrived. They initiated the study group grant and set the direction for their professional development efforts. How much would they have accomplished without the involvement of the university professor? The teachers say that her provision of resources saved them a great deal of time. Because of her expertise, she was able to identify relevant books to purchase and articles to read, recommend schools to visit, and lend books that the team was not able to buy. Given the tremendous demands on their time of becoming familiar with new practices, planning, implementing, evaluating and revising, in addition to the day-to-day demands of teaching, it is unlikely that they would have undertaken as extensive a documentation of their efforts (ten sets of slides, documentation of unit planning and implementation, copies of pen pal letters for analysis, etc.). It is also unlikely that the research project would have happened, and certainly not as extensively as it did. The university professor also facilitated the placement of the pre-service teachers at the school, which previously had not been an active field experience site. Her willingness to supervise the students made the site a viable one. Because the professor taught the first course in the middle school teacher preparation program she was able to interest students in the site through her examples and discussions about her activities there, resulting in requests for placement from students who would not likely have asked to be there otherwise.
Several of those interviewed shared the belief of the consortium liaison, who said, "The professional development mini-grant was a way to help that [PDT] team do what they already would have done. Chances are great that they wouldn't have pulled it off as well and as fast without your time and expertise. You were the help they needed." Another suggested that the PDT "took it further than the grant. I don't know that they would have moved via the same vehicle. [University] students were there, the interaction between professionals and pre-professionals . . . . Because you were there the movement took a particular direction."

A new principal began during the implementation year, providing one more factor that makes it difficult to separate the influence of the PDT on school change from what would have occurred without it. Both building administrators are very knowledgeable about middle school philosophy, research-based practice, and educational reform efforts, as well as being very skilled interpersonally and supportive of teachers. Many innovations unrelated to the PDT are flourishing, contributing to an overall school climate for growth. One school person felt that a lot of things happened around the same time and, like a good stew, it is hard to separate the particular contributions of any one ingredient. He did identify a research base and an objective view not tainted by politics or personalities of the school as specific strengths the professor brought to the school. He also described the value of her inside-outside relationship. Not teaching there or being an official part of the district made her an outsider while the amount of time she spent in the school made her an insider.

One theme running through everyone's comments was credibility. PDT teachers felt receiving the grants and working with the professor lent credibility to their work. One of the administrators concurred in observing that at a certain point in the process what was needed was outside validation, which came in the form of the grant and the professor's involvement. Publicity in the form of presentations at professional conferences and publication of articles about the work of the team validates our work as well as reflecting positively on the school and the district. The increased involvement of the professor with the team has increased the school's credibility with the university. The professor's involvement with the PDT allowed her to build
credibility with others in the building for herself personally and professionally as well as for involvement in PDS.

University administrators familiar with PDS observed that how people get to the point of having a conversation about PDS can be varied. Some start with an individual; others at an institutional level. In middle schools, the team structure offers higher visibility and greater legitimacy than an individual teacher, and therefore can provide an efficient model that can serve as an impetus for moving the whole school. "It's a make-sense kind of approach for getting your foot in the door, especially when you don't have models to work with." "PDT's are more manageable and accessible. It's a lot easier to get a team involved than a whole school. In this case it was done formally with a grant, but it could have been done informally." PDT also is more likely to result in success, as you get the volunteers that way and don't need to deal with the resisters initially. People involved can do a much better job of working with a team than a whole school, as there is more time available, efforts can be more focused, and results are more concentrated. Echoing the teacher quoted earlier, it is a foot in the door that leads to incremental change.

We also feel strongly that PDT is a viable concept in and of itself, not just as a stepping stone to PDS. It is an excellent way to enhance the professional development of a team of teachers and a professor who are interested in such an arrangement. PDT removes pressure from others who may not want to participate in such a venture while allowing those who do to pursue it. As was our experience, PDT can lead to resource envy on the part of others who may or may not be willing to make the same commitment as the PDT participants. If initiating a PDT, we recommend that the invitation to "apply" be an open one and that the criteria for selection be specified ahead of time. This way no one feels locked out and it should be clear why the participants were selected. We also recommend open communication throughout the project about the goals of the group, the additional responsibilities they have undertaken, and the resources that will be available. While our experience led to a PDS and we did not have the
opportunities to test these ideas in a stand-alone PDT, they have been successful in other projects where resources were limited.

Conclusions

Professional development teams can fulfill most of the goals of professional development schools, albeit for a smaller number of people: improving education for students and pre-service teachers; contributing to the professional development of both school and university faculty; and promoting research that answers questions relevant to the school site while also contributing to the larger body of professional literature. The one PDS goal that PDT’s are less likely to fulfill is contribution to school-wide reform or climate change, though positive effects were apparent for teachers and teams in the building beyond the one PDT.

The professional development team concept offers schools and universities a developmental approach to the PDS relationship, providing a formal structure in which early stages of PDS development can be explored. PDT offers an alternative to PDS for schools with limited resources or commitment, and suggests a route for involving additional personnel over time. The PDT concept provides an important opportunity for schools and universities to enjoy many of the benefits of professional development schools in circumstances where limited resources or other reasons prohibit full implementation of PDS. In addition to institutional benefits, PDT’s also provide the means by which university faculty members can consolidate and coordinate the many responsibilities of their jobs in ways that increase both the efficiency and quality of their work. Finally, PDT adds to the professional language, describing a common aspect of PDS development positively and precisely.

References


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