

5. Operating Philosophy and Project Strategies

Jule Dee Scarborough

Holistic Programming

Teachers have often told us that they find staff development to be disjointed and not necessarily relevant to their professional life. Most grants for supporting staff development provide for the costs of the development, but fewer pay for the extended time to support classroom pilots or implementation, and hardly any allow for multiple levels of programming and pilots.

All of our grant-supported work with schools contained a “program” of development, beginning with an initial needs assessment through administrators and followed by a needs assessment by the teachers. The program of development occurred actively: teachers performed while learning, and then they were supported while planning their pilots; they were observed and offered feedback during the pilots, and then they participated in pilot wrap-up sessions. Our program evolved to include many levels of programming and pilots. Teachers could participate in extended opportunities to learn, develop, and continue to pilot again. This greatly enhanced sustainability. Teachers were reassured that what they were doing was worthwhile, and, if the data showed student achievement, they were more likely to continue once the project ended.

The holistic nature and complexity of our endeavors made us more a “center” of activities than a single grant program. Our initial aim was to identify districts in need and offer to seek support for their reform needs. Therefore, over the years, as teachers or district leaders learned about our programs, they asked us to seek grants to support the program offerings or similar initiatives in their districts. We have found it challenging to sustain our focus while building interdisciplinary teaching teams at middle and high school levels, unless particular conditions are in place. Networking has remained a key strategy. In all initiatives, we have tried to connect teachers with each other within districts, but also across districts and with external partners.

Although we have focused on secondary teachers, we have worked with both purely middle school groups and purely high school groups and have had them participate together. Some merged groups felt that it was fine to include teachers from grades 6-12 in the same professional development sessions; some did not. My opinion is that the high school teachers can learn a lot from the middle school teachers when it comes to engaging students. Also, as long as high school teachers are working directly with high school, and middle school with middle school, there does not seem to be any real problem working with them together. There is another invisible level to consider: those high school teachers who teach primarily the first-year and second-year classes and those who teach the third-year and fourth-year classes. Admittedly, what they teach and how they should or do teach can be quite different, but the third-year/fourth-year teachers can learn a lot from the others. We have also had a group called “transitions,” the eighth and ninth grade teachers working together to develop transitional activities between the middle and high school levels for their students.

The Rockford project involved approximately 300 teachers over seven years; other projects have involved as many as 50, 75, or 150 per year. While we could work with larger

numbers of teachers or teacher teams, our preference was to work with 40 to 50 at one time. Our strategy was truly engaged learning – doing and performing while learning. This degree of involvement made it possible to work successfully with larger numbers, but it required highly competent program leaders. Additional funding sources sometimes enabled us to work with teachers in very small groups, in which they received individual attention and were able to address individual concerns, brainstorm their ideas to a much deeper level, and learn more about knowledge with which they were less secure.

Integrated MSTE Curriculum

The culminating products were always integrated and interdisciplinary mathematics, science, technology, and English (MSTE) curriculum modules, three to eight weeks in duration, for each year of the teams or individuals participating. Some of the modules were a semester long and a few were year long.

The modules were far more than merely the curriculum content, knowledge, or skills to be learned. Embedded within them were the new strategies, techniques, procedures, or processes. For example, in trying to achieve learning at the higher levels of Bloom's Taxonomy, teachers used more engaged teaching and learning strategies and models, more authentic student performance assessment procedures, and so forth. These were also major components in the curriculum modules, making the whole much greater than its parts, both content and process. The major outcomes and deliverables went well beyond these curricula products. For the teachers, the module was the culminating product or deliverable, which included other nested products, processes, strategies, practices, and procedures.

We submitted copies of the modules to the Illinois Curriculum Center to share final products across teachers, schools, districts, and statewide. Advancements in electronic communications enabled us to share more easily, although we had some frustrations at first with incompatible software packages. The additional materials that teachers include (books, adapted materials, videos) are not available. (See www.strategicalliance.niu.edu.)

Pull versus Push

In teaching about a variety of pull-versus-push models in industrial management classes at Northern Illinois University, I had not originally considered that terminology in the context of professional development programs for teachers. Then one of our mathematics professors used it in describing the approach to working with the mathematics teachers in some of the discipline-update workshops. Once he used the phrase in this context, I found that it precisely described what our program is all about. Although we designed a program to match the identified needs, we were flexible with changes suggested by the teachers, such as more programming or extended time on topics. Our philosophy was to meet the needs of the teachers so that they could become more capable in moving students to higher levels of achievement, making their curriculum and learning activities more relevant and authentic, and improving their pedagogical and technological skills. We began with a clearly defined program and expected outcomes; then the teachers pulled and we did our best to respond. That was how we evolved to multiple levels of programming (Rusin, 2002). We are now more conscious of that philosophical goal.

Modeling

In our initiatives, those who led were expected to model that which they expected of teacher participants. For example, program leaders were required to use the engaged teaching models, not just tell teachers about them and ask them to use the models. Again, when we asked the teachers to develop student performance tasks with scoring rubrics establishing the standards of performance, we also used that approach ourselves. We provided teachers with a rubric establishing the standards and criteria for their module product. Not only did this make participants more inclined to try new strategies, but it built professional trust and set a firm foundation of professional exchange.

Relationships

It was important for program leaders to find common ground with the teachers; after all, they had similar teaching and learning issues, whether at the secondary or higher-education level. Relationships were built on trust, credibility, truthfulness, delivery of promises, and mutual respect – qualities that developed when the leaders created a safe learning climate in which all were comfortable owning up to what they did not know, where everyone was a resource, and where the leaders learned and acknowledged that they were also learning from the teachers. We had program leaders from the community college; the university; business, industry, and community organizations; and, most importantly, we had “peer leaders,” practicing teachers who had been program leaders.

Building self-confidence, self-esteem, and self-efficacy

Many teachers had serious reservations about their own capabilities to learn or perform; they felt uncomfortable working in groups with predetermined criteria or standards to achieve, especially if some type of rubric, feedback process, or review of their accomplishments was involved. Some became defensive and began to have reservations about participating. Therefore, our first step was to work them through what they would be expected to deliver, how the process would take place, what rewards would be provided, how they would be held accountable, what would occur at various levels of performance, and, most importantly, what support they would have as they went through the program. If promises of support were made, they must be fulfilled as described.

We had very few teachers actually drop out because we showed them that they could succeed if they worked with us appropriately. If they were committed and followed through, sought help or confirmation that they were on track, used available feedback, and worked together, they could attain higher levels of performance and successfully complete their work with us.

Building trust

Trust can be broken by something very insignificant, but if teachers sense that leaders are genuine and trying their best to deliver, they stand behind them. How is trust built between secondary and higher-education collaborators? It is both complex and simple. The cultures are very different, and human dynamics make groups very complex. Typically, in the relationship

between secondary and higher education professionals, the university is perceived as the driver. To build trust for productive and respectful collaboration requires defining how all parties can contribute and benefit. Genuinely participative decision making is crucial, along with an explanation of what is mandated, such as grant regulations.

For example, at the beginning of almost every endeavor, some teachers questioned our motives for working with them. They asked if they were being studied as part of someone's research or dissertation or if the data collected was going to serve someone's publication interests. Often they could not see that what they accomplished would be important to publish so other schools could gain access to the results. This concern caused us not to publish about most of our work with teachers. As a result the teachers trusted us, but it did limit our ability to disseminate the results of our work; indeed, the level of university faculty involvement in our projects may have been limited by the fact that we were able to publish relatively little about the processes and outcomes.

Continuous feedback

Our operating philosophy included providing feedback at each stage of development so that teachers understood where they were in their performance and product development. The feedback took place informally and formally. Formal feedback increased dramatically over the final years, and we began to use rubrics more often to document progress and feedback. Although we were careful about "evaluation," we did have to evaluate the final products or performances of the teachers. The more feedback that occurred throughout the program formally, the more successful the evaluations were, ending with celebrations rather than frustration.

Creating an exchange forum of ideas and strategies

We find it beneficial to be open about our difficulties in teaching and learning. Some teachers claim that our university working environment and students are very different from theirs, but most saw the common ground. When we worked closely for more extended periods, teachers began to appreciate that we tried some of their ideas in our own classrooms and were more willing to research something together or have our students work together across levels. Once collaboration began, it created endless opportunity for exchange.

Mentoring

The word mentoring gets a lot of use, but it is rarely implemented in a formal way, and therefore, we use the term carefully. Our goal was always to have mentoring going on between professionals, but we never had consistent, formal mentoring relationships where meetings were scheduled. Instead teachers and professors or other partners developed a comfort zone and felt confident that they could call, email, or visit one another. During the Rockford initiative, participants and leaders found a comfort zone that lasted beyond the formal grant period, largely because the leaders were approachable, responsive, and genuinely interested in the teachers. Also, the teachers were excited by the research, types of courses, and experiences of the

professors. Only a few of the leaders were in education; rather most of them were practicing scientists, engineers, industrial technologists, or experts in fields such as aviation or nursing.

Teachers know a lot about what should occur in the classroom, but most of them lack experience outside of the classroom. Therefore, when teachers are partnered with professors who are active beyond college or university teaching or with representatives from business, industry, and community organizations, they are able to extend their disciplinary knowledge.

Joining Teachers in the Classroom

We went beyond offering in-service programs. We found it critical to follow teachers into the classrooms to pilot or field test their educational models, processes, strategies, techniques, procedures, and curricula. When we were present to lend support and observe, teachers felt more secure in trying something new and less anxious that they would be penalized if it did not go well. We set the program up so that teachers prepared for their pilots by clearly identifying what was new and what goals they desired to achieve. We did this as part of a preparation meeting, and then we joined them in the classroom to observe aspects of their pilots, but not the whole thing, as most pilots ranged from three to eight weeks. If a teacher team was involved, we visited each teacher during the pilot.

Immediately after the pilots, we engaged with the teachers in examining what worked, what did not, and what changes should be made. They appreciated this approach and evaluated it highly. This went far to ensure continued implementation after the grant period. An extension of this model, also very successful but not always possible, was to convene meetings twice a year to network on pilot outcomes, usually before Christmas break and at the end of the year. These depended upon external but relevant considerations, such as whether teachers had to be paid stipends for each hour of participation because of union regulations. Teachers enjoyed and benefited from these sessions, and many were willing to participate without direct rewards.

We also extended what might be perceived as the more traditional activities of the professors, as program leaders, to those of learner. In the Rockford project, we felt that our professors needed to better understand what teachers face in the classroom and local contexts. Therefore, all professors participated in classroom visitation and observation to become at least minimally familiar with the secondary teaching and learning context. Most were amazed. Many had not recently been in a school classroom, except for parent/teacher conferences about their own children. This contextual experience greatly helped them gain insight about what teachers face on a daily basis, which was expanded by conversing with teachers throughout the program.

We created yet another opportunity for the professors. We asked them to develop integrated interdisciplinary modules to deliver in the secondary classrooms. Most of the university faculty agreed, as did a few of the community college professors. The university faculty used the module format required for the teacher modules to varying degrees. We did not tie them rigorously to the format, but instead asked them to identify state standards and other curricular requirements. They then delivered the modules in the classrooms.

We created this opportunity for two reasons: (1) to give professors the opportunity to work directly with students and (2) to initiate a closer connection among teachers, students, and professors for ongoing visitation and joint lessons, so that secondary students would become familiar with professors and have the opportunity to ask questions and seek information about

the discipline, particular lessons, or educational requirements for careers. This was very successful. The professors were open to continuing these activities should teachers continue to request them.

Leadership through Partnership

It was possible, using one lead person, to provide a program less complex than this one but similar in its foundation. My experience ranged from being sole lead person for an entire program, as well as evaluator and project administrator, to being the project investigator or director of a very complex and extended group of key personnel across one or more institutions with program delivery and evaluation responsibilities. The phrase “internal partners” meant across colleges and departments internal to Northern Illinois University; other educational partners were the school districts, community colleges, and regional education offices. Funding partners ranged from one (e.g., the National Science Foundation) to several simultaneously, including the Illinois State Board of Education and the Illinois Board of Higher Education, and local matches by the educational institutions and school districts. Partners also included master secondary teachers as peer leaders. And, very importantly, the business, industry, and community (BIC) partners engaged in communities of practices were invaluable to extend and deepen knowledge and understanding of MSTE contexts. Internal and external partners brought a wealth of knowledge and real-world contexts that one person could not deliver. Exposure helped teachers create more authentic lessons, assessments, and learning activities.

Our NSF grant funded one professor each from mathematics, physics, chemistry, biology, and English, and two from engineering technology from both the university and community college; one peer lead teacher; one educational specialist; the PI; and two co-directors with subcontracts, one to the school district and one to the community college partner. However, we had 23-30 NIU and 15 community college professors, plus others, active in this project because of success in obtaining additional funding. When able to match funds, we could involve a broader group with different perspectives, levels of creativity, special interests, and abilities and were better able to match professors with teachers. Also, the range of teachers included middle school and high school. Some professors had difficulty working at the middle school level, but by broadening our group, we were able to include those who could work successfully at each level.

Finally, we are discovering a new category of resources for teachers: the many professors who are taking their retirement, some of them at quite young ages. Many of them are interested in continuing their work with us and the teachers or are continuing as consultants to stay active in their fields and plan to keep an office on campus. Most are retiring locally, so it will be important to organize contact information and activities.

Professionalism

For teachers to be productive, they have to feel professional, be treated as professionals, and be in a space and environment conducive to getting work done. We find dramatic differences in the quality of work and the level of productivity according to the type of environment in which sessions or events are held.

Usually, schools were not the most appropriate professional development environments and had too many potential distractions. We tried to provide the professional development elsewhere, except for one case when the high school had a wing with full Internet hookups for laptops, a professional setting, and was conducive to small- or large-group work. Most of the time, we offered the development sessions at the community college, the university, or extension centers, and often at conference hotels.

Technology and Tools

Teachers expected to produce or perform must have easy access to the appropriate technology and tools. We led the way in providing teachers with laptop computers, printers, scanners, digital cameras, software generic for the whole group, and software or peripherals specific to individual or team endeavors. Once they learned how to use the technology, their sense of professionalism, and their productivity and product quality increased exponentially. Having a reason for using the technology encouraged them to learn more rapidly. They were required to use their technology in the classroom with the students, even if they had to rotate students. The technology was officially donated to the schools but permanently assigned to individual teachers if they followed through with participation. They could take their technology home and use it with their families as long as they also brought it back to the classroom. This worked well.

Extrinsic Rewards

Our philosophy was to reward teachers appropriately with summer stipends, graduate credit, or continuing professional development units (CPDUs). Teachers greatly appreciated a stipend of some kind or a mix of stipend, graduate credit, or CPDUs toward recertification. The teachers, and we, also considered the technology provided as a component of the reward structure, since it became theirs when they completed the program.

Intrinsic Rewards

In our attempt to provide intrinsically rewarding experiences that would result in the teachers' enthusiasm, excitement, and professional growth, we strove to ensure that the following did *not* occur (Sparks, 1997, p. 20; Killion, 2002, p. 64):

For too many teachers, staff development is a demeaning, mind-numbing experience in which they passively "sit and get." As one observer put it, "I hope to die during an in-service session because the transition between life and death would be so subtle."

The problem with staff development is that it is always done to us, as if we cannot be trusted. We are intelligent people who possess a desire to learn to improve our performance and that of our students. Frankly, we can be trusted to structure our own learning experiences if the administration would give us a chance. Most of us want to prepare for the next semester so we are ready when classes begin. Most of us want to know what is current in our fields. And most of us are tired of the administration telling

us what is important to learn. Why don't they ever ask teachers for their ideas or suggestions?

To further examine our staff development model, see Chapter 6.

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