The Keys to Successful Professional Development

and Application in the Area of Technology

Alan P. Sears

Education 728 Inquiry Seminar

Dr. David Kommer

Ashland University

July 7, 2004
ABSTRACT

This paper looks at the aspect of successful professional development, how, when, where, how often, and why it should be done. Educators at every level have been exposed to good and bad professional development, whether a two-hour meeting or a three-day seminar. The important thing is to realize what makes some professional development work while other programs or training sessions miserably fail. Is failure due to content, preparation, communication, or all of the above?

Another topic researched in this paper is the aspect of professional development as it deals with technology in education. Not only can technology help in the classroom, but it can also assist with an educator’s everyday duties. Technology is not only computer usage. With many new technological advances in school, teachers now more than ever need to be able to deal with and use these nuances to better themselves professionally. Technology will not only make teachers better at their chosen profession, but also can drastically cut down on their workload and eliminate a large amount of paperwork in the process.
SUCCESSFUL PROFESSIONAL DEVELOPMENT IN TECHNOLOGY

Professional Development

Proper and relevant professional development is essential for teachers to succeed in the classroom. It has been said that the quality of a school is directly proportional to the success of its professional development (Thair & Treagust, 2003). Educating teachers incorrectly not only sours them on particular topics, but also on the professional development process altogether. Many of the items that teachers need to learn or need remediation with can be taught or brushed up on through in-services or other learning opportunities, but proper procedure and follow-up needs to occur. An area of professional development that is lacking in many districts is related to the field of technology. Modern teachers need not only be able to use many types of technology to keep up in the classroom, but also to be proficient for proper accountability and recordkeeping. This holds true whether the teacher in question is a new teacher or a veteran of 25 or more years. The veterans of education may not have actually seen many drastic changes in professional development over the years because there have not been many alterations made in the recent past (Guskey & Huberman, 1995). The major purpose of this paper is to outline exactly what successful professional development entails, while putting an emphasis on the topic of improving the use of technology by today’s classroom teacher, both in teaching and in duties that are not directly related to the classroom.

The History of Staff Development

Professional development is not an old concept. It did not become widespread in most of the country until the 1950’s (Speck & Knipe, 2001), and the 1980’s will likely be remembered as the decade of school improvement with the onset of mass staff development (Wood, Killian, McQuarrie, & Thompson, 1993). While professional development is a relatively new idea,
education and teaching are not. One reason for the massive growth in need of staff development for teachers is the introduction of technology into the classroom. Since the decade of the 80’s, when professional development saw its big boom, technology in schools has also become much more prevalent. (Lanier, Maeroff, Brown, Sykes, Murray, Barnes, Judge, & Wagstaff, 1995). The need is most likely greater for more experienced teachers due to the lack of technology when they were enrolled in teacher education programs. Most new teachers graduating from universities have at least the basic skills needed to perform their daily duties, although some are still lacking the skills needed to perform at a top level technologically as educators. Successful professional development is not only an overriding factor in improving these skills, but it also lies at the heart of nearly every school district’s mission (Lanier, et. al., 1995)

*Practice makes perfect*

From a professional development perspective, traditional teacher-learning activities fall short of assisting teachers in teaching for actual understanding. Most teacher-learning can only be acquired through practice, whether related directly to the classroom or other school duties outside the classroom (Kwakman, 2003). For this reason, professional development must be something that is going to be used or practiced regularly so that it is not forgotten or thought of as unimportant. Teachers have many occupational obligations to deal with constantly, so an in-service must be considered useful or imperative to be taken seriously. Professional development must also be something that is going to improve the educational process at some point (Tam & Cheng, 1996). Going through staff development is more than just a process of sitting through a training session or in-service meeting. The information that is being taught needs to be used again in the near future to hold its relevance. Learning a topic and not practicing it is not conducive to comprehension.
Reflection

At any school, complaints are heard about students forgetting information shortly after an exam, and the same thing holds true for teachers themselves. Even after implementing and practicing a new activity or learned task, a teacher needs more training on the subject, not to mention some time to reflect upon what they have learned. They need to look at the quality of the information, the relevance of the information, as well as any alternate courses of action that can be taken to take advantage of this new information (Astuto, Clark, Read, McGree, & Fernandez, 1994). It is important to reflect both on the positive and negative aspects of the concept (Speck & Knipe, 2001). The positive elements will help the teacher reflect on what they taught or learned, while the negative elements will help them focus on how they can improve their own learning. Looking back on learned items constantly reminds teachers how that material can be used in their classroom or other teaching duties. Self-evaluation is also critical in the reflection process. After an in-service, a teacher may look back and see that the material was very useful to some aspect of education. If, in reflection, the teacher deems the information useless, then he or she is less likely to remember it. However, if the material presented is catered to each teacher’s needs, then the teacher is more likely to use it to benefit his or her own classroom.

One major problem with attempting to reflect on a typical in-service training session is the lack of preparation that goes into them. Most educators know the many hours it takes to prepare for a class of students and the same holds true when attempting to educate teachers. Professional development planners must take teachers’ concerns under consideration and prepare training accordingly (Speck & Knipe, 2001). Many times insufficient preparation makes for a poor meeting, thus making self-evaluation difficult. Numerous teacher-training programs entail
piling into an auditorium after school to hear someone lecture on a particular topic, then upon leaving a teacher completely removes oneself from the idea presented (Bullough Jr. & Krindel, 2003). After leaving a meeting like that, the typical teacher is not going to sit down and reflect on what was learned or heard, and he or she is most likely not going to deem what they heard as something of value. Not only does the training need to be properly prepared and informative, but it also needs to be somewhat enjoyable and relevant so that the teachers can see where the information is leading them.

Relevance

Training must also be catered to each area and level of expertise. In order to achieve this, the material needs to be presented on a broad enough scale so that it can in some way be catered to each individual, so it is useful to the entire group being trained (Harris, 1980). Through definition alone, professional development should do nothing less than develop a person’s ability to perform his or her occupation. One simple way for administrators to ensure that this takes place is to evaluate each teacher’s individual professional plan. Not every teacher can have an exact goal met at every in-service, but by monitoring these growth profiles the persons in charge of professional development could more easily cater to the needs of the entire staff (Speck & Knipe, 2001). Professional development is more useful to a group of teachers when it is applicable directly to their profession, whether pertaining to duties inside or outside of the classroom. Relevant professional development is much more valuable than a methods class taken at a university (Lanier et. al., 1995).

Keeping the material relevant to as many teachers as possible could also make for less tension among teachers. When the material presented in an in-service applies to some of the attendees but not others, it may widen the gap between those interested in the material and those
Professional Development in Technology

who are not (Yamagata-Lynch, 2003). It reasons that if everybody is interested and sees the merit of what is being presented that a common goal can be seen. Most educators have sat through a meeting or seminar that has absolutely nothing to do with them, and have seen others around them that were excited. Conversely, some of the meetings that excited a particular teacher were useless to others. The goal is to keep the material presented pertinent to as many people in the room as possible. Teachers will work harder to reach a goal when the goals are laid out clearly and there are incentives to reach the goal (Ingram, Louis, & Schroeder, 2004).

It has been suggested that one way to get teachers interested in their training is to give them ownership of the professional development programs, which will allow them to see the relevance to their goal. Teachers feel empowered when they are given the right to make choices concerning what they learn, and also how they learn it. There have even been studies that have surmised that teachers don’t change their methods at all when there are conflicting ideas concerning professional development (Thair & Treagust, 2003). This points toward administrator’s allowing teachers to choose training that they feel is important and relevant to their particular situation. It has even been suggested that pay raises be included for teachers that attend this pertinent training (Thair & Treagust, 2003).

*Delivery of Information*

Educators understand that how material is presented is one of the most important aspects of whether or not your pupils learn. There are several types of delivery for professional development and, depending on the type of information that is being presented, different styles are more appropriate. Group size is also an important factor depending on the type of presentation. For example, in a seminar situation where a group study of a particular topic is taking place you wouldn’t want 100 pupils involved. The optimal number for a seminar type
situation is 8-12 pupils. Teachers have sat through numerous lecture-type training sessions, and this is not suitable in the area of technology. In a technology-related workshop, which would be more hands-on, a group of 8-24 is desirable, depending on the number of stations you have available (Orlich, 1989).

The staff developers also play a major role in how well the material is delivered. The developers must know the staff well and be competent in what they are attempting to deliver. The staff developer needs to take on the role of three different people. First is the role of the change agent. The change agent ensures that it is well known that this change is for a reason, and that as many of the staff as possible understand this. The second role for the staff developer is that of the facilitator of learning. The developer needs to make sure that he or she doesn’t impede the process of development (Caldwell, 1989), while providing all necessary information in the area of discussion. The third role of the staff developer is being in charge of some type of follow-up. If done correctly, follow-up will take care of itself. The material being presented should be relevant to the teachers’ work life, so they will hopefully take it upon themselves to stay up to date. The problem arises from all the other new techniques that teachers need to be educated on and finding the time to do so. The goal in this and any other professional development situation is to keep the teacher up to speed on necessary items without creating teacher burnout.

**Burnout**

A study of 42 teachers from Virginia who decided not to return to teaching for the 1991-92 school year, indicated that stress was one of the leading factors in their decision to leave the profession. Other leading causes of leaving the profession, as listed by the teachers, were stress-related as well, including lack of resources, lack of time, excessive meetings, large class sizes, lack of assistance, lack of support, and hostile parents (Carter, 1993). Difficult and unmotivated
students and various administrative practices are other factors facing teachers today. Thus, psychological burnout may occur, leading to deteriorating work performance, as well as negative psychological and physical conditions (anonymous, 2000). Teachers need to be properly trained to deal with these issues, as well as, others to eliminate as much stress as possible in their daily routine.

Demands placed on teachers now to learn new things are growing more rapidly than ever. This can lead to teacher burnout very quickly. Not only is it necessary to keep up with current issues, but it is also important to keep an eye on the future to see what lies ahead. Change is a large factor in teacher stress, which leads to burnout (Huberman & Vandenberghe 1999). Stress places pressure on any professional, and eventually that stress will lead to overload, which turns into burnout.

Some may see professional development as adding to the problem of stress in the workplace, but actually, the opposite is true. Proper professional development better prepares teachers for their everyday obligations, thus reducing the stress and burnout levels. Better prepared teachers are more confident in their abilities and are much more likely to succeed (Huberman & Vandenberghe, 1999). Educators know the importance of constantly being prepared, and the positive aspects of being on top of things. By properly implementing professional development in any area, not only can the stress level be reduced, but teachers will also be better suited to perform their duties. This will allow them to better themselves in the more difficult areas of the profession, and concentrate more on keeping up with the nuances of the job, instead of focusing on the negative aspects of teaching.
Professional Development in the Area of Technology

Technology has come to the forefront as a major concern in education today. Not since the mid 1950’s has there been more pressure from educational proponents for our students to become better prepared technologically (Demiranda, 2004). Not only are the students expected to have some knowledge of computers and other technologies, but so are teachers. Technology is used in many facets of education today. Whether it be taking attendance, sending memos by e-mail, entering grades or even making lessons using a word processing program, teachers must be more savvy than ever in the area of computers. Many teachers have come through teacher training that has enabled them to learn these things, while others have taken learning upon themselves. However, there are still a number of educators that need training in the area of technology. While the need does exist for staff development in the area of technology, in-service opportunities in this area are definitely lacking (Sandholtz & Reilly, 2004).

With the vast array of professional development available to most teachers, weaving technology into this mix is a necessity. The students coming into schools are more aware and more competent than ever when it comes to dealing with computers. For a teacher to teach using a computer, or any other type of technology, they are going to have to do their best to stay a step ahead of their pupils. The best way for teachers to stay ahead of the group is through proper training.

Why Technology?

In a traditional classroom, the teacher is lecturing and the students are listening. In most cases the teacher out-talks the students at a 3-1 ratio or greater (De Miranda, 2004). With the use of technology, students can become more involved in their learning. Arguments have been made that technology is misused in school systems. Just having a computer in front of every kid and
every teacher does not make for a better educational process. These computers must be put to
good use. When a teacher uses technology it is only to supplement traditional teaching methods,
not to change the instructional process entirely (Howard, B., 1999). The material being learned,
in most cases, is no different due to the advent of new technologies. What has changed is how
that information can be presented, and how teachers must prepare in order to deliver this
information properly. Teachers using technology improperly in the classroom, or using
technology incorrectly for daily school-related duties, are creating a problem for themselves.
Instead of using technology to their advantage, they could possibly be creating more work than
necessary. Not only must teachers use technology properly and in a relevant manner, they must
also take the time to gain and maintain the proper skills through professional development (Tiene
& Ingram, 2001). They must receive constant training to keep up to date on things that can
enhance their teaching and also cut down on their workload outside the classroom.

What needs to be learned?

There are many computer applications that will work well in a classroom setting. While
information still needs to be cross-referenced for validity, the Internet is one of the best research
tools available. Teachers will need to be proficient in basically two programs to accomplish this,
Internet Explorer and Netscape Navigator. Both will help students and teachers research areas of
interest and intellect, making little difference which program is chosen. Power Point is another
valuable tool, helping students develop presentations. Microsoft Word and Excel will also help
students and teachers keep data organized and are easily mastered. There are also numerous
programs to help in subject areas from English to Mathematics. Other non-computer related
technologies are also important, such as graphing calculators and hand-held organizers (Tiene &
Ingram, 2001).
Not only is the computer an important aspect of technology, but there are also many other instruments that teachers must deal with on a daily basis to survive. Gone are the days of the ditto machine and punch cards. From copy and fax machines to voice mail and smart-boards, new technologies are becoming prevalent in nearly every school across the country. With some of these new innovations in mind, one can see that the classroom is not the only place that technology needs to be used. Not only can it help in the classroom, but it can dramatically change the way a teacher goes about his or her everyday work life. With this new technology popping up, teachers need to be trained extensively before attempting to use these items. Teachers receive training concerning many areas in which they need to be proficient such as classroom management, dealing with parents, safety issues, and legalities. Training every employee extensively on the equipment that they are going to be expected to use is the next logical step.

The problem with Training Teachers

As most teacher-education programs introduce technology into their programs, educators just entering the field are more likely to have familiarity with many facets of technology. The National Council for Accreditation of Teacher Education (NCATE), who is responsible for accrediting educational colleges, is creating standards for teacher education programs. Not only are they creating standards, they are also pushing for more rigorous technological training (Roblyer & Edwards, 2000). The problem with this is that the teachers who didn’t go through this training must learn the information on their own or rely on their district’s professional development to learn the necessary skills. A teacher of 5 years will have had more collegiate training with technology than a teacher of 25 years, and here lies a problem. Each teacher of
science has basically the same science background from a university, whether it was 5 or 25 years ago, but the same is not true when dealing with technology (Roblyer & Edwards, 2000).

Rosen and Weil (1995) performed an in-depth study of technophobia, the perceived fear of technology. In this study, they found that the perception of technophobia really didn’t discriminate between age groups. They also found that it didn’t matter whether a person was already a teacher or was in teacher training. They found that exposure to technology was an important factor in overcoming technophobia. Computer experience and exposure were found to be inversely related to the amount of tension felt when dealing with computers. The more exposure and experience a person had with certain items, the lesser the phobia was felt when dealing with that particular piece of equipment or software. The same held true for nearly every type of technology, not just with computers. The authors focused this study on 5 specific variables. These variables were administration’s support, computer availability, perceived mathematical ability, gender, and formal training. Gender was noted as an interesting factor, because it was found that, in most cases, females experienced more technological anxiety than males (Rosen & Weil, 1995).

Two factors that inhibit continuous professional development were indicated in a study dealing with the Springfield, Illinois School District. The first factor cited was the enormous amount of time it took to develop and implement professional development, especially dealing with technology. Time is at a premium for any educator, and useless or non-relevant training does waste precious time, so proper planning must be the first step taken. The training first has to be planned so that it fits into the school schedule and each teacher’s time-line for getting things done. There has to be time laid out for the actual training, then for reflection on this training, and lastly for a follow-up exercise so that comprehension is guaranteed (Waugh & Handler, 1998).
Professional Development in Technology

The second factor is fiscal. It is costly to bring in new technological advances, and also to train teachers to understand and operate them. The Springfield, Illinois School District allocated well over $1 million on technology alone during the 1996 school year. Of this money, over thirty percent of it went towards teacher training (Waugh & Handler, 1998). Many times people fail to realize the cost of training. As new technologies enter school buildings across the country, this cost will continue to rise. It is not only costly to fill a school with computers and other technological equipment, but also to maintain and update the equipment. Training is another huge expense. Bringing someone in from the outside to hold an in-service and follow-up can cost thousands per day, with finding someone in-house to do the training sometimes difficult. With the fiscal emergencies that exist in many districts, cost plays a major role in the actual professional development that takes place in many districts.

Proper Training is the Key

As mentioned earlier, proper professional development is essential when learning or reinforcing any concept. Training in the field of technology is not exempt from this idea. It is not only imperative to train properly, but also on the identical equipment in which these tasks are to be performed. Introducing new technology improperly, or on equipment different than that which the teacher will be using, is hardly better than not introducing it at all. Jones and Compton have come up with several ways to ensure that the development runs smoothly and that the teachers get everything possible out of the development (1998). One of the most important methods that Jones and Compton found was that teachers facilitate each other’s learning process very well. Teachers need to talk to each other, especially when dealing with technology in education. They can learn from each other, see where they need to be, and also know where they need to go when it comes to competency. Teachers also do not feel alone if they know that their colleagues are
dealing with the same problems and situations that they are. It was also found invaluable to have as many teachers as possible experiencing the same situations, so that nobody felt like they were dealing with things alone or left on an island. Not only does working together eliminate some anxiety, it also allows people who feel subordinate or questionable in a certain type of training to see that they are not alone, realizing that there are others feeling the same way that they do concerning that particular topic.

A second method to keep teachers interested and motivated in technological professional development is to give teachers an obvious and legitimate role in their training. This gives teachers a feeling of ownership and accountability in the area in which they are being trained. It also allows teachers to see where they’ve been, where they are, and where they are going before the training ever begins. Teachers that intervene and have a hand in their own professional development don’t want to see it fail, and will go to much greater lengths to see that it is successful than if an outsider or non-colleague designed the training. It also reinforces the importance of taking into account teacher’s ideas of technology, how important it is to them, and how they plan to use it in and out of the classroom. It also allows teachers to learn from one another and grow together. Collaborative learning has been shown to work well with students, and the same holds true with teachers (Jones & Compton, 1998). As stated earlier, teachers feel empowerment when they are given ownership of professional development. Collaboration with colleagues would give technology training a definite feeling of ownership and relevance to the teachers, leading to more interest by the participants, which concludes in a more successful outcome.
The Process

The district plays the most important role in developing a strong technological training program. The first step in program development is to have as many people as possible on board to back what is happening. The next step is to align the training with your district’s needs and wants. Cater to what that particular district deems important, not just what others are doing. Set goals, stick to them, and make sure that everyone involved understands these goals. These goals do not have to be district-wide, but should be as broad as possible, so that it does involve nearly everyone. Follow-up is necessary after the training is complete, as it is not desirable to just train and release people. There has to be some sort of communication, if for no other reason than to let the participants know that what they just learned is still important. The last factor mentioned, and maybe one of the most important is funding (Desimone, Porter, Birman, Garet & Yoon, 2002). Funding is an issue that will always be an obstacle for continuous improvement. As mentioned earlier, technology training is expensive and the cost for training in the field of technology is at a premium.

Teachers are constantly negotiating classroom decisions and trying to balance obligations imposed upon them by colleagues, community, students and administrators. Their busy schedules do not allow opportunities to engage in long drawn-out discussions or seminars. For this reason, professional development sessions must be short and to the point (Yamagata-Lynch, 2003). We know that the pupils learn better in short bursts, and this doesn’t change when dealing with teachers. Most in-service and professional development meetings take place after a seven or eight hour work day, and a short lesson filled only with necessary information will allow the attendees to absorb as much information as possible. When a technological lesson is taught, it
should be something that a teacher can look at and say, “I can use that to make my job easier and improve my teaching.”

The key to developing any type of education is to start small, but think big. Begin with chunks of information that will eventually lead you to your goal, being careful not to put too much information in front of the participants at any given time. Work in teams, so that there is always constant support, demand feedback and follow-up, and gather it quickly to keep it fresh in the mind of the learner. Provide continued support of the topic, letting people know that they have someone to fall back on if a question ever arises. The last and most important step is to integrate the topic after educating the teacher, letting he or she know that this professional development was useful (Guskey & Huberman, 1995).

Conclusion

This paper has described what is necessary for successful professional development to take place. Not only is successful training important in areas that are current concerns, but professional development also needs to look to the future to keep educators one step ahead of things to come. Technological professional development is no different. Teachers need to be looking toward the future to see what type of technology will be helpful in their classroom, as well as helping them with everyday obligations outside the classroom. Applying positive professional development schemes to the area of technology will help teachers better their abilities, making them better teachers. That is goal of professional development; to make teachers more successful at their profession.
References


**Biography**

*This paper was written by Alan Sears. Alan has completed 10 years as a secondary mathematics teacher. He has been employed at Pioneer Career and Technology center for each of his 10 years. During that time, he has taught Applied Mathematics I and II, Integrated Mathematics 2 and 3, Geometry, Algebra II and Industrial Blueprint Reading. He has been involved with the High Schools That Work initiative to raise the standards for high school students, and has actively participated in the Pioneer Education Association. This paper was the last step for Alan in his quest to receive his master’s degree from Ashland University.*

*Alan and his wife of 8 years, Niccole, have a son Jack Thomas Sears. Jack was born on November 22, 2003.*