

Traditional or Online Methods of Professional Development: A Comparative Study of K-12
Teacher Preferences

Dr. Marlene Cole
Poplarville School District Career Development Center
9 Career Center Circle
Poplarville, MS 39470
(601) 795-1354

Dr. Ronald A. Styron, Jr.
Assistant Professor
Department of Educational Leadership and Research
118 College Drive #5027
University of Southern Mississippi
Hattiesburg, MS 39406-0001
601.266.4581 (o)
601.266.5141 (f)
ronald.styron@usm.edu

Abstract: Teachers from two counties in a southeastern state who have participated in an online professional development module answered survey questions regarding their attitudes toward the two methods of delivery of staff development as well as questions pertaining to teacher attitudes toward technology prior to the training and their attitudes after the training. The participants were divided into two groups—K-6 and 7-12. While the results indicated that no statistically significant difference was found on their preference between online and traditional delivery of professional development, the results did indicate that teachers were willing to participate in another online professional development opportunity and that the majority preferred the online method of delivery.

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Introduction

Online professional development opportunities have dramatically increased in number over the past few years as technology has advanced (Brown & Green, 2003). The challenge for administrators when planning professional development is to provide teachers with programming they find both intellectually stimulating and pleasurable (Beatty, 2003).

The purpose of this study was to determine whether teachers were more likely to prefer online methods in lieu of traditional face-to-face methods of obtaining training on various topics pertaining to technology. The study also determined if teachers who participated in online professional development carried their method of learning online into the classroom and as a

result, incorporated more technology within teaching methodologies and encouraged greater student interactivity with technology. Results of this study can be used to assist professional development coordinators and administrators to plan effective professional development in that it determines teacher preference of delivery methods.

Related Literature

The review of literature includes citations and discussion pertaining to the traits of professional development, professional development models, distance education, the need for professional development, student utilization of technology, and technology training and curricular integration.

Brody (1995) identified several traits to be considered when developing a comprehensive professional development program. Among those traits include the reputation of the trainer, the rewards available to the participants, both tangible and intangible, and the support of the administration.

For the most part, traditional staff development models require everyone to participate at the same time and in the same location creating problems such as scheduling, travel, space, and funding. Web-delivered staff development allows teachers to log on and participate at the time of day that is best for them and at a comfortable pace. Web-delivered staff development is available 24 hours a day, 7 days a week (Bintrim, 2002).

Burke (1994) concluded that the use of effective distance education programs for K-12 staff development should be increased to supplement face-to-face in-services due to the positive evaluations of K-12 educators who participated in the electronic distance education in-service programs.

When asked questions concerning the type of professional development that is needed in school districts, many faculty members answer “technology training.” “Teachers consistently call for training on using technology” (Seamon and Levitt, 2001, p. 177). Therefore, teachers are aware of the importance of using technology, but are somewhat limited in their skills and desperately search for ways to implement technology to assist them in their lesson planning with the students’ best interests in mind. Do we spend funds on the technology first and then conduct the training, or do we provide the training and then purchase the technology (Seamon & Levitt, 2001)?

With the majority of school districts having computers in the classroom, libraries, and computer labs, the number of assignments given by teachers requiring students to utilize technology as part of their learning process is low, especially in the areas of language, science, and the arts both at the elementary and secondary levels.

As additional technology is being placed in schools today, one would think that the students would be entering the workforce with greater technology literacy than ever before. However, this is not the case according to projections obtained in 1998; only approximately 22% of employees that entered the workforce possessed the technology skills needed for 60% of new jobs in the year 2000. In the same year, the United States Department of Education indicated that only 59% of students were utilizing computers in the classroom (Poole & Moran, 1998). This means that teachers are not incorporating technology into their lesson plans to allow the students to expand their learning to include the use of technology.

Schools are struggling with what to do next with technology training while in some cases, computers are gathering dust in the corner even after teachers have been sent to some form of technology workshop. Poole and Moran (1998) identified several factors that contribute to the

ineffectiveness of technology staff development. Those factors include the lack of support from administration, unawareness of what is needed in the schools, inadequate one-shot workshops with no follow-up, expense of training, and lack of continued support.

Training teachers to use the technology provided to them is an important task, and the means by which this training takes place, online training or traditional face-to-face training, could have a substantial impact. Jackson (1999, p. 26) stated that, "Clearly, the traditional approaches aren't working, and using powerful technologies to enable educators to take the steps necessary to prepare students for a technology-rich future is a vital first step to insuring our nation's multi-billion dollar investment in computers and technology is not wasted." The "traditional approaches" Jackson referred to involve the methods of professional development that have been used in the past to encourage teachers to incorporate technology into their classrooms. It is time to look for new, innovative means to deliver professional development.

Integrating online resources into existing curriculum is not something that comes naturally to a vast majority of teachers. We have to do a better job of demonstrating a compelling reason for teachers to use technology. Predictions by the U. S. Bureau of Labor Statistics indicate that in the near future, 70% of jobs will be knowledge jobs that utilize advanced technologies and by the year 2010, 90% of those jobs will go unfilled (Jackson, 1999). In order to help prepare students for the workforce of tomorrow, we must incorporate technology into our curriculum. What better way to do that than to model using the Internet? As educators, we are taught to model or demonstrate a skill to our students in the process of teaching to accommodate various learning styles including auditory, visual, and kinesthetic. No difference should be shown in incorporating technology into the learning process for teachers.

Teachers seeking professional development opportunities to help them learn and use the technology that is available may view online learning as a positive alternative to the physical travel required to attend brick and mortar colleges. In the same sense, administrators often see this type of delivery as a “cash cow,” meaning that they can train a large number of teachers without the added expense of providing a climate controlled building and travel costs (Brown & Green, 2003). Just because something is more economical than the alternative, online professional development compared to traditional face-to-face professional development, does not mean that it is better.

It is evident that teachers need, and will continue to need, professional development geared toward new technology. It is also apparent that more and more professional development opportunities are becoming available to teachers through online sources due to many factors including time, cost to the district, and availability. It is up to the local districts to jump on the bandwagon and decide whether they want to participate in online training or stick to the traditional face-to-face methods of training their faculty

Research Design

Quantitative data was gathered for this study using a causal comparative design, whereas responses from 90 K-6 and 7-12 teachers who participated in at least one online module through TeacherLine (free professional development sponsored by PBS TeacherLine) were analyzed through a survey instrument (Appendix A) to determine if there was a difference in attitudes of online professional development. These teachers were from two different schools in a school district located in the southern region of the United States. The level of computer experience prior to participating in an online professional development session was a factor in analyzing

data since the teachers' comfort levels with technology could affect their attitudes toward being involved in professional development that is based primarily on technology.

The research investigated teachers' willingness to incorporate technology into their classrooms after participating in an online professional development session. For example, the study explored whether the teachers were more willing to use a computer as a tool to help them teach. An example of this might be using PowerPoint presentations to enhance their lectures or a Web site that contains reference information. It also determined their willingness to allow the students to use technology. For example, is the teacher willing to make assignments whereby the student has to gather data from the World Wide Web, compose a paper on a computer, and make a multimedia presentation on the topic? The research also looked at teacher attitudes toward participating in staff development if it were offered in the online format with more facilitator interaction and feedback as opposed to traditional face-to-face methods.

Findings

The results of the study indicated that the vast majority of the respondents to the survey understood the benefits of using technology to enhance the learning and teaching experience and the value of using technology in the classroom after they participated in online professional development. These data alone are enough to demonstrate to professional development coordinators that the use of technology is important to most teachers, and with the advancement of technology comes the dilemma of providing constant training on new technologies. It is also the opinion of the authors of this work that the results of this survey would be similar if administered in other school districts (See Table 1).

Table 1.

Preference Frequency

Variable	Variable Description	None	Low	Avg	Above Avg	High
Frequency (Percentage)						
Q13	Preference of face-to-face professional development	2(3.6)	16(29.1)	21(38.2)	14(25.5)	2(3.6)
Q14	Preference of online professional development	0(0)	7(12.7)	17(30.9)	14(25.5)	17(30.9)

It is also clear that the preferred method of delivering this training is through online professional development with 89.1% of the teachers willing to participate in another online module through TeacherLine and 85.5% willing to participate in any form of online professional development. The above average and high range of responses to the question asking for the participants' preference of the online method of professional development totaled 56.4% while the same range of responses to their preference of the traditional face-to-face method of professional development indicated only 29.1%. Overall, the data suggest that teachers prefer online instruction.

Due to the fact that age, years of experience, and job title of a technology trainer is of little importance to most teachers, it is suggested that perhaps school districts could utilize the students who have been previously trained on certain aspects of technology to assist with the training of the entire faculty.

Implications for Educational Leaders

Educational leaders such as principals, staff development coordinators, and superintendents can consider the information gathered through this study to improve professional development programming. To improve school practices, educational leaders should make every effort to provide quality professional development that is geared toward the needs of the teachers. In order to determine the preferences and learning styles of a faculty, educational leaders could require the faculty to attend similar professional development opportunities, one using the online method of delivery and the other using the traditional face-to-face method. After, a survey similar to the one used in this study could be completed by each faculty member in order for the administration to provide the type of professional development that is most rewarding to the teachers, and in turn, more rewarding to the students. An alternative would be to utilize the data collected in this study and offer various professional development opportunities to accommodate as many learning styles as possible. Educational leaders could look for and make available various staff development opportunities including some that are strictly asynchronous, some that offer a type of hybrid environment, some that allow for synchronous learning, and some that are strictly traditional, face-to-face meetings. As the results of this survey show, more professional development should be geared toward the online method of delivery.

As was found in the study, teachers are aware of the importance of the students' use of technology. Educational leaders need to capitalize on that information and offer professional development opportunities geared strictly toward training teachers on how to involve the students in the use of technology. The workforce demands employees to use technology. Because schools are in the business of educating young people to be productive citizens, educational leaders must insist that students be required to become familiar with technology in their learning process.

Preferred Staff Development Models

As the research suggests, administrators should avoid requiring staff development based on only one model. Offering only face-to-face models of staff development or only offering online models of staff development will hinder the learning process of the teachers involved. Teachers are required to provide a variety of learning models to accommodate a variety of learning styles possessed by students. Staff development for teachers should be no different.

Effective staff development in school districts should consist of two models: (1) online learning for those who prefer not to be shut up in a lab consisting of novice, intermediate, and advanced learners and (2) face-to-face technology training with an experienced facilitator to guide the flow of instruction for those who are unsure of their technological abilities.

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APPENDIX A
SURVEY QUESTIONS

1. What is your gender?
 Female Male
2. What is your age range?
 20-30 31-40 41-50 51-60 over 60
3. At what grade level do you teach or with which you are affiliated?
 K-6 7-12
4. How many online professional development sessions have you completed?

5. How would you rate your level of computer skill **prior** to participating in the online professional development?
 novice below average average above average expert
6. How would you rate your level of computer skill **after** participating in the online professional development?
 novice below average average above average expert
7. How often do you access your e-mail?
 hardly ever
 weekly
 several times weekly
 daily
 several times daily
8. When saving files on your computer, how often do you specify specific locations (folders) in which to store them?
 never hardly ever often almost always always
9. How would you rate the amount of time you spent on the online professional development module as compared to the amount of time it would take to complete the module in a face-to-face situation?
 less time for online same time for both more time for online

<i>Please answer the following questions by bubbling in the appropriate response</i>		none or not at all	low	average	above average	high
10	How would you rate your self-confidence level when utilizing a computer prior to participating in the online professional development?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	How would you rate your self-confidence level when utilizing a computer after participating in the online professional development?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	What is your satisfaction level of time spent for the online module as compared to a face-to-face session of similar content?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	How would you rate your preference for the traditional face-to-face method of professional development?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	How would you rate your preference for the online method of professional development?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	Before your participation in the online professional development, how would you rate your use of the Internet as part of your teaching methodology?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	How would you rate your willingness to incorporate technology into your classroom before participating in online professional development?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	After your participation in the online professional development, how would you rate your use of the Internet as part of your teaching methodology?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	How would you rate your willingness to incorporate technology into your classroom after participating in online professional development?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	Before participating in online professional development, how would you rate the number of assignments you gave directing your students to research information via the Internet?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	Before participating in online professional development, how would you rate the number of assignments you gave directing your students to create and present information using some form of technology?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	How would you rate your comfort level with utilizing technology as a tool for student learning before participating in online professional development?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	After participating in online professional development, how would you rate the number of assignments you gave directing your students to research information via the Internet?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	After participating in online professional development, how would you rate the number of assignments you gave directing your students to create and present information using some form of technology?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	How would you rate your comfort level in utilizing technology as a tool for student learning after participating in online professional development?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	When measuring success for online professional development, how important is the facilitator's participation and feedback?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	When considering online professional development, how important is it to you to be given the information and assignments and be allowed to complete the tasks at your own pace?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	What is your comfort level in allowing students who are familiar with technology to assist you with learning about specific technology?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<i>Please answer the following questions by bubbling in the appropriate response</i>		none or not at all	low	average	above average	high
28	How important are factors such as age, years of experience, and job title of a technology trainer to you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29	How would you rate your satisfaction with your school district's current staff development program?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30	How would you rate your overall satisfaction with the online professional development module?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31	How would you rate your perception of how much you learned through the online professional development module?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32	Before participating in the online professional development, my understanding of the benefits in using technology to enhance the learning and teaching experiences was:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33	After participating in the online professional development, my understanding of the benefits in using technology to enhance the learning and teaching experiences is:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34	How would you rate the "value" of using technology in the classroom?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35. Would you consider participating in another module through TeacherLine?
36. Would you consider participating in another online professional development opportunity not associated with TeacherLine?
37. What suggestions would you give to improve online professional development?
38. What aspect of the online professional development module did you like best?
39. What aspect of the online professional development module did you like least?
40. Have you formed any networking relationships with other TeacherLine participants that have proved helpful to you? Explain.
41. If teachers in your school were given the opportunity to teach in a technology-enhanced classroom, how much effort would you put forward in trying to get into that classroom?