

RUNNING HEAD: Technology In-Servicing

Research Proposal
Technology In-Servicing

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Abstract

Computers, which are becoming more prevalent in public school classroom, remain second-hand citizens to other instructional materials. This study aims to remedy the fate of current technology by in-servicing teachers in active and practical ways to implement these multimedia machines into the curriculum. Participating teachers from Bethune Elementary in San Diego, CA will receive training and a booklet of activities they can use in their classroom. At the conclusion, teachers and students will show a significant increase in the amount of time spent on the computer. This study will show that many teachers must have adequate hands-on training in technology before it becomes an integral part of the curriculum.

Introduction

More public schools are purchasing computers; however, in many instances, the technology remains in boxes or on teachers' desks unused. George, Sleeth, & Pearce, (1996) suggest that teachers resist new technologies because they feel incompetent or insecure in their abilities, have little time to learn a new skill, or do not recognize the value of technology. Therefore, if teachers have the opportunity to learn how to use computers, see how technology is a valuable resource, and get activities they can use in their classroom, they will integrate it in their curriculum.

To increase computer usage, schools can design in-services to train teachers in technology. Sexton, Snyder, Wolfe, Lobman, Strickler, & Akers (1996) argue that effective in-services must include interactive strategies, such as discussions, role playing, and simulations. They also suggest that there must be follow-up opportunities where teachers receive support in transferring their training to daily practice.

Others have suggested that single day in-services are ineffective. For example, Sariscsany (1996) recommends workshops that span a minimum of a week. In this model, presenters model a strategy, participants practice the strategy with presenters' feedback, then the group discusses and reflects on how to implement the strategy.

Caverly, Peterson, & Mandeville (1997) also suggest longer workshops in educating teachers in the use of technology. They propose that workshops should aim to prepare teachers to train their colleagues as well as participate in professional growth activities that hone their skills.

However, these long-term workshops require much planning and endorsement at the district level. Most individual schools rely on in-services for training. This study will employ strategies described in the studies cited above to develop a one day program that will give teachers the necessary information and skills to integrate computers into their classroom. This study will show that a well-planned in-service for elementary school teachers with

adequate follow-up activities can be an effective teacher training method and increase teachers' and students' classroom computer usage.

Methods and Procedures

Subjects and Intervention

Following a month long assessment of the current use of technology of teachers and their students in the classroom, a single day in-service focusing on classroom uses of ClarisWorks, HyperStudio, Netscape and Quickmail will take place in the computer lab at Bethune Elementary. All thirty teachers will attend this in-service. During the course of this in-service, the presenter/researcher will demonstrate various uses of these programs.

(Note: Most teachers have had some previous experience with the programs since they are already installed on classroom computers.) Teachers will then have the opportunity to practice the skills presented as well as discuss ways to integrate these skills into their classroom. Each attendee will receive a booklet containing all strategies presented during the in-service. The presenter will provide additional support by answering questions through e-mail.

Methodology and Measurement

Before and after the intervention, the researcher will collect data on the computer usage (measured in minutes per day) of teachers and students. Teachers and students will record their own computer usage in logs. Columns headings of data will include date, name, activity (word processing, game, etc.), and time spent (in minutes). Data will be collected weekly and entered into Microsoft Excel. Data collection will take place one month prior to and two months after the intervention. Independent variables will be "grade level" (K – 2, 3 – 5) and "type of computer usage" (instrumental is time spent in on curricular objectives, entertainment is time spent on games).

Anticipated Results

Statistical Analysis

Since this is a pre/post-test design with two independent variables of mixed measures, a split-plot factorial design will be performed to determine if the intervention caused a significant rise in computer usage. The alpha level will be set at 0.05.

Anticipated Result

Computer usage, specifically instrumental usage, is expected to rise after the intervention takes place. Marked increases in overall usage may occur in grades K – 2 over grades 3 – 5 because of class size (Class size mean for grades K – 2 is 19, class size mean for grades 3 – 5 is 32. Therefore, students in the younger grades may have more opportunities to use the classroom computer). However, significant increases in instrumental usage should occur in the upper grades. If the intended results do not occur in the allotted time, this does not necessarily indicate a failure of the study. Instead, the observational period may need to be lengthened to observe the anticipated results.

Discussion

Since only one school will be evaluated in this study, its generalizability to a larger population is questionable. However, since the computer usage of teachers and students on this campus is similar to that of others in the San Diego Unified School District, any conclusions should be generalizable to the school district. Variables that may cause conflicting results may be due to the computer expertise of teachers and the availability of additional software to individual teachers or school sites. The amount of administrative support may also be a factor in the success or failure of technology in-services.

Although in-services have received poor reviews in recent years and many school districts are searching for alternatives, they should not be completely abandoned. As Sexton, et. al. (1996) suggests, in-services may have been ineffective in the past because the methods presenters used were ineffective. Interactive strategies may increase the effectiveness of this training method, making elaborate workshops unnecessary in many situations.

In-services are easier to plan and more cost-effective than multiple day workshops for individual schools. They have an added benefit of security since participants are from a single school and in-services often take place at the school site. This familiar environment, personnel as well as computer equipment, should facilitate the learning process. If the presenter is also part of the faculty, teachers have easy access to pose questions or ask for advice. The presenter's monitoring of teachers' progress will also take less effort.

Despite their shortcomings, in-services may be the best answer to the professional growth needs of teachers. Therefore, research focused on improving their effectiveness is time well spent.

Bibliography

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