Professional Development: A Coaching Model

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Introduction

Currently a majority of teachers see technology as a positive useful tool, but are using it in the classroom for low-level tasks (teacher-centered practices) such as, word processing, Internet research, free time, and practice drills (Ertmer, 2005). The problem is the resistance teachers reveal when attempting to use technology in their instruction. When digging deeper into this problem, Kagim and Hausafus (2001) found "time as one of the most critical barriers to integration of technology" (Kagima & Hausafus, p.35).

What teachers need are contextualized-situated professional development opportunities, in which more time to plan is imbedded, in order to integrate high-level student-centered tasks that require students to plan, reason with others, problem solve, and promote higher order thinking. With this influx of support afforded by the district, teachers have expressed feelings of being overwhelmed with the new tools provided. This feeling resulted in teachers putting these new tools on the back burner.

Since the early 2000s, with the adoption of No Child Left Behind, a flood of new standards has overwhelmed education. Included in these standards, which were developed for all content standards, were standards for technology integration. Federal legislation mandated an emphasis on technology integration in all areas of K-12 education through The Enhancing Education through Technology Act of 2001(Barron, Kemker, Harmes, Kalaydjian 2003; Davies, 2011). This act provided grants for states that met specific requirements to integrate technology into the curriculum. State and local levels were expected to develop plans to effectively utilize technologies in the classrooms and the education system was expected to produce technology literate students (Barron, et al, 2003). With a big push for technology integration starting in early 2001 and the implementation of the new Common Core standards, thirteen years later there is a concern that technology is not being integrated into classroom instruction as much as theory suggests it should, even though most educators value technology.

This study sought to discover what percentage of teachers would increase their use of technology in their instruction after they complete their professional development coaching sessions. In the fall of this year, a lengthy survey was provided to elementary teachers at McNear Elementary to complete prior to the start of coaching sessions. The survey addressed areas of opinions, attitudes, technical needs, technology use in the classroom, and the level of proficiency in competencies with technology tools. Within the context of competencies, teachers were asked specifically about their use of software productivity tools through Google Drive, integration of technology into daily lessons, use of technology in support of curriculum standards, designing activities that integrate technology, and locating learning opportunities needed to advance technology skills. The literature suggested that teachers are likely to integrate technology into their instruction if they are given contextualized, situated, and sustained professional development opportunities. Sixteen teachers participated in the pre-survey and fifteen participated in the post survey.

Materials and Methods

The rationale for the methodology is quantitative and qualitative for the data analysis. This study used a small sampling of data collected from participants at McNear Elementary School in the scope of areas of improvement/technical needs, opinions and attitudes, competencies (proficiencies and importance), and anecdotal notes on task completion.

The population of this study consisted of 16 educators ranging from 1 to 32 years experience: Mean=13.8, Median= 14, and Mode=19. Of the 16 educators, 13 were general education teachers and three were special day teachers.

The quantitative data were collected at McNear Elementary School by the researcher through an email linked to a Google Form survey, which is an electronic data collection tool. Surveys were completed anonymously and data was automatically placed into a spreadsheet for easy viewing access and analysis. Teachers took this survey twice, once prior to training sessions and once at the end of training sessions to determine a variance in usage of technology in their instruction.

The qualitative data were also collected at McNear Elementary School in collaboration with the researcher and teacher(s) attending the training sessions. This data was used to ensure progress for each training session and work toward to the next level of need for the teacher(s) based on what was completed during the session as well as what they needed in regards to their students and classroom instruction.

Results

After reading 20 plus articles focused specifically on professional development, with an emphasis in technology training within the teaching profession, several themes emerged. The first theme was individualized professional development. A one-size fits all workshop does not prove effective when the abilities of the individuals in the room are varied. Just as teachers are expected to differentiate instruction for the students in their classrooms, the same it true for professionals seeking training in technology.

Another theme that emerged from the research was authentic learning experiences that capture the context in which the teacher plans to use technology in their classroom, which goes hand-in-hand with individualized professional development. When teachers receive authentic-contextualized professional development there are more opportunities for them to use these experiences in ways best suited for them professionally, which they are more likely to utilize with their students.

The last theme that surfaced was hands-on practice with technology. A tactile learning environment is the optimal way for teachers to discover, explore, and manipulate new technology in order to consider it a valid tool worth using in the classroom. With a hands-on, individualized, and contextualized learning environment, teachers are afforded an ideal professional development opportunity to nurture their new knowledge and skills with technology tools.

All the data collected from the surveys were logged and transformed into tables and charts for further analysis. The independent variable is the individualized training/coaching session each teacher has with the researcher. The dependent variable is the use of technology in each teacher's classroom instruction. Of the 16 teachers who took part in the technology coaching sessions, all 16 took the Pre-Coaching Survey and 15 took the Post-Coaching Survey.

There was four specific areas teachers responded to in the surveys in regards to technology: competencies (level of proficiency and level of importance), opinions and attitudes, technical needs and improvements, and specific technology use in the classroom.
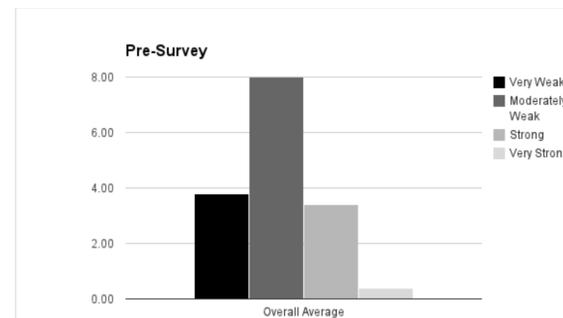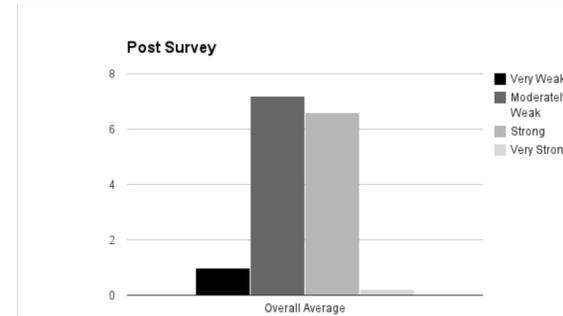

Figure 3: Pre-Survey-Overall Average

Figure 4: Post Survey-Overall Average

The overall average of the levels of proficiencies in five areas shown above, most teachers reported as moderately weak (n=8) in the pre-survey and in the post survey (n=7.2). This resulted in a decline in reports of very strong (n=0.40>0.02) and very weak (n=3.8>1) and an increase in reports of strong (n=3.4<6.6) (see figures 3 and 4).

In spite of the fact that teachers' reports show, overall, they felt more proficient in the five specific competency areas, there were two important areas where no growth was reported. The first, designing activities that will integrate technology and the second, locating learning opportunities needed to advance my technology skills. This ensuing chapter will examine these tendencies and consider the implications of the survey data.
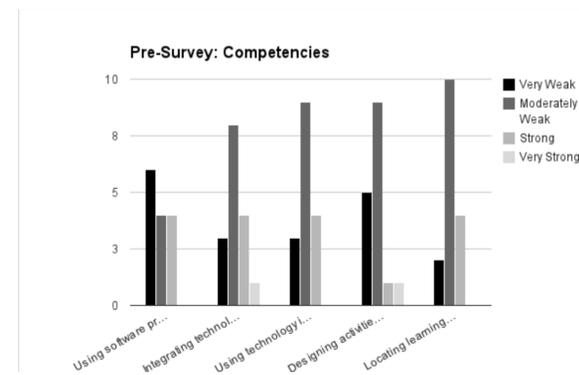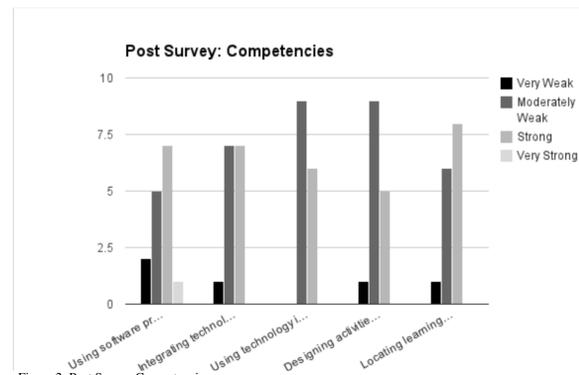

Figure 1: Pre-Survey Competencies

Figure 2: Post Survey Competencies

Conclusions

The ongoing issue of deficient professional development in technology is evident by the fact that teachers are not integrating technology into their instruction. Many teachers attend large conventions that offer one-hour mini-sessions, which leave them overwhelmed and unable to take away anything to use effectively in the classroom. Districts that continue to offer funding for teachers to attend these conferences will continue to see a low percentage of teachers integrating technology into their instruction effectively. Instead of wasting money on these large-scale trainings, district admins should be spending that money developing a program that meets the abilities and professional needs of the teachers at each school site. Through the study, pre and post surveys determined that teacher' competencies and attitude levels increased as a result of the sustained individualized coaching model. Teachers and students of the 21st century can greatly benefit from the technologies available by incorporating new strategies into professional development programs.

Literature cited

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Acknowledgments

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