

Case Report – Teacher Web Pages in the Sullivan School District

Background

Since the widespread adoption of the World Wide Web in recent years, the use of self-designed web pages by teachers for educational purposes has become a fairly common practice in the United States. Considerable effort has been expended in trying to encourage this practice among the teachers in the Sullivan School District as well. The adoption process began in the 2000-01 school year, at which time any teacher who requested a web site was assigned space on the school's web server and given a user name and password. No training was offered during the first year. Teachers who wanted a web site were expected to know how to write HTML code and how to use an FTP program to transfer their pages to the web server. Needless to say, there were only a few innovators who initially took advantage of the opportunity.

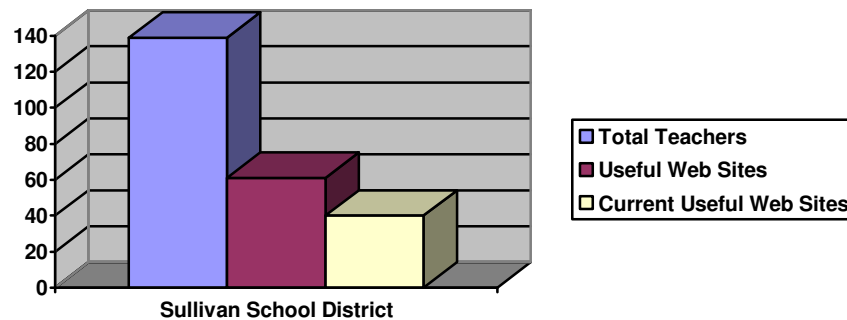
The following year, the District Technology Coordinator began offering some very basic training on creating web pages. She had discovered the free Netscape Composer program which, used in conjunction with the likewise free WS_FTP software, provided an easier way to create web pages. However, the process was still complicated, Netscape Composer was rather limited, and the WS_FTP interface was not user-friendly for technology novices. As a result, some additional early adopters joined the ranks of teachers with web sites, but the vast majority still remained offline.

At the beginning of the 2002-03 school year, the District purchased rights to Microsoft Office including FrontPage. FrontPage was much easier to use and it eliminated the need for a separate FTP program. Since that time, the administration has strongly encouraged its teachers to create and maintain their own web pages. Nearly all technology training has focused on using FrontPage with several workshops per year. Being that "*diffusion* is the process by which an innovation is communicated through certain channels over time among the members of a social system," the following will examine the adoption of teacher web pages through the Sullivan School District over the past four school years.

Current Data

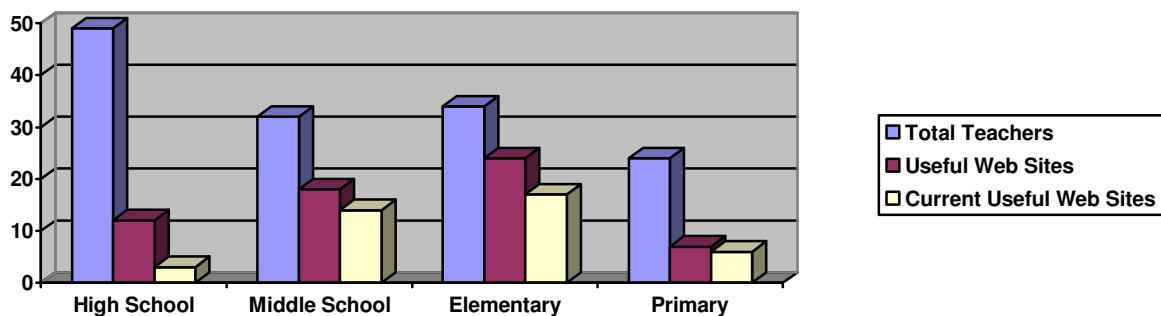
To determine the current level of use, I went to the District web site and examined all teacher web pages at each building within the District. I compared the number of useful web sites to the total number of teachers. I also examined how many of the useful web pages were current. Useful web sites were those which had academic information relevant to each teacher's subject area. Current web pages were defined as any that have been updated at least once in the past six months. The following table illustrates the cumulative data that were gathered.

Table 1: District-Wide Web Site Usage



As can be seen in Table 1, the adoption of web site usage in the District has not been very successful, and this in spite of the concerted efforts of the administration to encourage widespread usage. Of nearly 140 teachers, fewer than half have useful web sites and less than one-third have updated their web sites in the past six months. The following table further breaks down the results by the four buildings in the Sullivan School District.

Table 2: Web Site Usage by Building



It is apparent that Sullivan High School is by far the weakest of the four buildings with only 6% of the teachers having current useful web sites. Sullivan Elementary School is the strongest with 50% of their teachers being online and up-to-date. After all of the time and effort, it appears that teacher web site usage has thus far failed to diffuse.

Analysis of Non-Diffusion

As a teacher in the Sullivan School District, I have been able to observe the attempts to encourage adoption and this course has helped me to identify why those efforts have failed. First of all, our previous Technology Coordinator, Karen, was a change agent who was more technically competent than her clients. Similar to Nelinda in the water boiling case study in Chapter 1 of the Rogers text, Karen was always more “innovation-oriented” rather than “client-oriented”. She would get very excited about new technologies but would neglect to consider how teachers would use the technology. In fact, several years ago we had an entire training session on how to use Palm Pilots in the classroom. The District didn’t even own any Palm Pilots! Even today they are still not available. Despite the fact that Karen had once been a

teacher, she had lost touch with the rest of us, resulting in a heterophilous group of participants in the diffusion process.

Looking at the perceived attributes of the teacher web site innovation, I am also able to identify some factors that have contributed to the non-diffusion. First of all, the perceived relative advantage of using web sites to communicate information was rather low. Although there are some obvious benefits to online correspondence, those benefits were not successfully communicated to the potential adopters. Many teachers have been using other effective means of communicating with students, parents, and other teachers for many years. It is interesting to note that most of the teachers who had non-current web sites had not updated them since the second week of June 2005. In referring to my records, I discovered that during that week, the District sponsored a four-day web page workshop for which teachers were paid \$100 for attending. It is obvious that the addition of financial reward to the equation resulted in a sufficiently increased relative advantage for many teachers. However, after the workshop concluded and checks had been received, the relative advantage returned to normal, resulting in widespread discontinuance.

There were additional perceived attributes which also contributed to the non-diffusion. The complexity of using online web pages is considerable, especially compared to running off a letter or flyer and sending it home with students. The trialability was also an issue being nearly non-existent. To experiment with the innovation, teachers would still have to learn how to use the complex FrontPage software. While compatibility and observability do not appear to have negatively affected the adoption of the innovation, there were still sufficient negative perceived attributes to prevent most individuals from progressing to the Implementation and Confirmation stages of the Innovation-Decision process.

If the administration of the Sullivan School District desires to further the adoption of teacher web pages, they will need to make several changes. In addition to manipulating the perceived attributes of the innovation, they will need to focus more on opinion leaders in the communication network. Up to this point, nearly all communication came directly from the Technology Coordinator to the masses of teachers. By focusing on training a few opinion leaders to effectively use teacher web pages, they should have more success in the future. This process appears to be underway via the newly adopted Train the Trainer program in the District. Teacher web pages can truly be an effective tool with positive results that cannot be obtained through other mediums. Overcoming the challenges of diffusion will surely benefit student learning in the Sullivan School District.