

Chapter XIII

The Impact of PowerPoint Presentations on Student Achievement and Student Attitudes

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ABSTRACT

Seventh grade students were tested on their knowledge of sentences and nouns in a language arts classroom. This study was conducted over a two-year time frame. In the first year, classes consisted of twenty-eight (28) males and thirty-one (31) females. All students are Caucasians with the exception of two African American males. In year two, the classes consisted of thirty-two (32) females and thirty-two (32) males. All students are Caucasians with the exception of one African American female and one Nicaraguan-American female. Students are predominantly from middle class families. All three classes are grouped heterogeneously. During instruction for two units, classes were taught with the following approaches: 1) using traditional methods of book work and handouts for one unit, and 2) using technological aids such as Microsoft PowerPoint for a second unit. Test results from three classes during both units were compared. The data indicates that when using technological aids as teaching tools, student test grades increased in year one, especially for low-achieving students or for those with learning disabilities. In year two, those same results were not achieved. A technology survey was also used to establish each student's comfort level with technology and their attitudes towards the use of technological aids in the classroom.

INTRODUCTION

The Bellefonte Area School District recently acquired ceiling-mounted LCD projectors for use in all school classrooms. The projectors have the capability to project images and video from teacher computers, VCR's, DVD players, and television sets. Teachers also have been given a remote to turn on the projectors, as well as a wireless remote to change between computer and video sources. This remote can also be used as a wireless means of operating PowerPoint presentations and as a "mouse" for searching the internet.

Seventh grade language arts teachers have been plagued by a lack of grammar textbooks for our students. There are not enough books for each student to have his/her own copy. As a result, many teachers utilize overhead projectors with transparencies and homework packets to teach grammar. Many students find this means of teaching as stoic and ineffective. Therefore, the purpose of this research was to measure the attitudes and achievement of students when comparing traditional methods of teaching versus the use of the overhead LCD projector in conjunction with PowerPoint presentations.

REVIEW OF THE LITERATURE

Technology is everywhere in today's schools and larger society. For the current youth generation, the Internet has *always* existed. Online technologies have profoundly contributed to a dramatic technocultural shift in contemporary society, transforming how we learn, work, play, and socialize (Steinkuehler, C., University of Wisconsin-Madison) For those who have grown up with such technologies, this heterogeneous, networked, online global, "flat" (Friedman, 2005) world is the unremarkable mainstream.

Technology is available in our classrooms, and it is changing the way educators think about teaching and the way students think about learn-

ing. Yet, students will not make significant gains on their own. Students spend countless hours at home playing games on their PC's or surfing the internet. This does not necessarily transfer to an increase in student achievement. Furthermore, 45 to 90 minutes a week in the computer lab does not foster the type of learning that will improve student achievement (Kozlowski, 2000). Research reminds us that technology generally improves performance when the application directly supports the curriculum standards being assessed (Cradler, McNabb, Freeman, & Burchett, 2002). A review of studies conducted by the CEO Forum (2001) emphasizes that "technology can have the greatest impact when integrated into the curriculum to achieve clear, measurable educational objectives."

Extreme advances in its use as a teaching tool are more apparent every day. Many researchers point to the great value that technology brings in motivating students and increasing achievement. However, others still find that technological resources are misused and abused and can create more problems than good. It must be made clear that technology in the schools will not change motivation and achievement alone. The introduction of technology in the classrooms may produce enthusiasm from both teachers and students, but having rooms full of computers, projectors, software, and handhelds are useless dust collectors if not productively accessed by trained professionals. Students cannot reach their full potential with technological tools without a well-trained staff of professionals to guide them. Technology should be used when it is the most appropriate tool for the lesson or activity, not because it is simply available. Time and resources must be allocated to help teachers acquire the expertise necessary to feel comfortable using technology to create student-centered learning environments. Teachers must be given the proper training and support to integrate technology into their classrooms for the positive effects of technology on student engagement to last (Sandholtz, Ringstaff,

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