

K-12 STUDENT PERCEPTIONS OF CLASSROOM COMPUTER USE

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INTRODUCTION

The Department of Education and Human Development of the State University of New York at Brockport is in its fifth year of a Goals2000 funded project to prepare pre-service and in-service teachers to use technology. The project has involved placing hardware in individual schools, training teachers to use the hardware, networking the schools, setting up a listserv for communication, and having periodic meetings and mini-conferences. SUNY Brockport has been involved in both the in-service teacher training and primarily in the pre-service training of future teachers.

The fourth year of the project, 1998 - 1999, focused on preparing teachers in the use of presentation graphics, HyperStudio or PowerPoint, and to increase teacher and student use of the World Wide Web. Teacher training sessions centered on learning to use presentation software, using the WWW as a research medium, and using Microsoft FrontPage to create classroom web pages.

SURVEYS AND INTERVIEWS

To evaluate the effectiveness of training for in-service the first author developed a Likert-Type questionnaire for teachers, interviewed a sample of teachers, and analyzed training records. Survey questionnaires focused mainly on the knowledge and use of the World Wide Web. Data from district Technology Integration Teachers indicates what types of training were provided and the

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number of teachers attending. The Technology Office has also provided information regarding special requests by teachers for help with projects.

The authors developed three different student surveys. For grades K —2 the survey consisted of three three-part questions (computer use, videos and filmstrips, and overhead projectors). For grades 3—5 the survey contained four questions (computers, the Internet, videos and filmstrips, and overhead projectors). For grades 6— 12 the survey contained seven questions representing an expansion of the same four topics. All surveys focused on the student's perceptions of how information technology, in general, and the World Wide Web, in particular, had been incorporated into their classes. Ninety-five students from grades K — 12 participated in the survey.

Surveys in grades K —2 were administered by their teachers and then returned to the researchers. Survey items were read aloud to the students and they were asked to respond by placing a mark on the “happy face” indicating a “yes” or the “sad face” indicating a ‘no.’ In grades 3 — 5 surveys consisted of four statements each with four possible responses related to frequency of teacher use of information technology: every day, once a week, once a month, and never. For grades 6— 12 the surveys contained seven items that further expanded on the four topic areas and with the same response categories as grades 3—5. Two of the researchers visited each high school, middle school and K — 5 school participating. Students were randomly selected to complete the surveys.

The two researchers also interviewed seven students from different grade levels in a one on one format. The interview questions were based on the surveys and allowed the researchers to validate or further expand on the findings. The interviews were conducted with randomly chosen students who did not complete the surveys. Responses were recorded verbatim and no tape recorders were used. The interviews lasted between ten and fifteen minutes.

TEACHER PERCEPTION OF INSTRUCTIONAL TECHNOLOGY USE

An analysis of the surveys returned by teachers involved with the Goals2000 project has indicated a substantial increase in the use of WWW resources in planning for instruction. The surveys have provided the following information regarding teacher use of Educational Structures and the World Wide Web in general:

- Most teachers responding to the survey used their computers between 1 and 5 hours per week with the World Wide Web.
- These teachers used the World Wide Web for class preparation and not for instruction or as part of work within the classroom.
- Teachers viewed World Wide Web use as a supplement to their usual teaching.

STUDENT PERCEPTION OF INSTRUCTIONAL TECHNOLOGY USE

Students in grades K —2 use the computer anywhere from one to five days per week. They typically work alone at the computer and use it for practice, “games,” and “typing stories” they have written. Videos and filmstrips are used often in classrooms with this age group as are overhead projectors.

In grades 3 —5 students use computers in their classrooms at least once per week. Students work alone or with a partner. Some students use the computer for specialized purposes such as art. Students in this age group occasionally use the Internet. They also only occasionally watch videos or filmstrips. Interestingly the teachers at this grade level rarely use the overhead projector.

At the grade 6— 12 level it was apparent that the teachers used the computers in the classroom more than the students. When students have a chance to use computers they work individually to “research, play games, e-mail, and type labs or other homework assignments.” Most of the teachers and students used the Internet in the classroom. Filmstrips and videos were used occasionally and overhead projectors were used frequently. Teachers at these grade levels often give assignments that require the student to use a computer in some way.

CONCLUSIONS

The Goals2000 project has been successful in increasing the use of information technology both in and out of the classroom. Teachers are using the technology more than ever to prepare for their teaching. Teachers are also encouraging students to use the technology both for their own research and to prepare presentations for class. In a very short period of time teachers involved with the project have become very sophisticated computer users.

As a secondary outcome, teachers and technology integration teachers are looking at the placement of new computer equipment. The elementary classroom configuration with 4 to 5 computers in each classroom needs to be investigated for use at the middle and high schools. The location of computer labs, no matter how numerous, inhibits spontaneous use of information technology by students and prohibits its regular use as part of the instructional process by the teacher.

Students notice the technology being used in their classrooms. Many of the teachers actively use technology in their classes. This occurs more frequently at the elementary grade levels than at the middle and high school levels. Students at the elementary level tend to use computers as part of their lesson while use at the middle and high school levels seems to have the teacher using it as a presentation device or model.