

Study conducted by



11785 Beltsville Drive  
Calverton, MD 20705

In collaboration with  
Johns Hopkins Center  
for Technology in Education and  
Maryland Public Television

# State of the State Survey: Student Technology Use

*Part 1 of a series of reports on Maryland teachers and technology*

The Survey of Technology Use by Maryland Teachers, funded by a grant from the U.S. Department of Education, provides a picture of how educational technology is currently being used at the classroom level.

This survey of 664 K-12 teachers from all 24 Maryland school districts, conducted in the spring of 2002, measured teachers' knowledge and skills, access to technology, use of technology for instructional and administrative purposes, and professional development experiences and interests.

This summary describes how frequently Maryland teachers use technology with students in the classroom, the purposes for which they use it, and the barriers that they perceive to technology integration. Other topic reports from the Survey of Technology Use are also available.

## Over Half of Teachers Use Technology at Least Twice a Week

Fifty-six percent of teachers use technology with students at least twice a week, and almost a third (32%) use it more than once a day. On the other

hand, 8 percent use it in class less than once a semester, including 1 percent who reported never using technology with students (Figure 1).

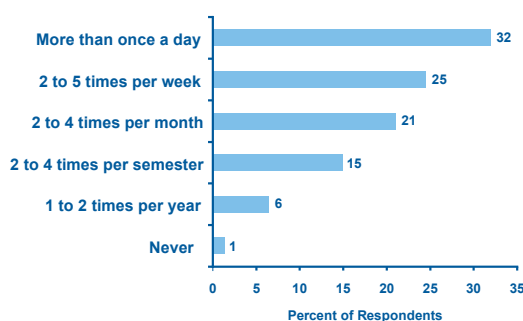
On average, more experienced teachers use technology with students more often than newer teachers. Over a third (37%) of respondents with more than ten years of experience reported using technology with students more than once a day, while only 26 percent of less experienced teachers reported doing so. At the same time, however, teachers with more experience were also more likely to indicate that they never used technology with students. Over 2 percent of teachers with more than 10 years of experience reported never doing so, as opposed to less than 1 percent of newer teachers.

## Maryland Teachers Are Active Users of Online Resources

About three quarters of Maryland teachers (74%) have used online lesson plans in the past year. Educators who have been teaching ten years or less were more likely to report having done so (82%) than more experienced teachers (65%). About half of teachers (51%) have used webquests or online treasure hunts, and significantly fewer (28%) have used electronic field trips.

Teachers expressed enthusiasm for using all three of these resources in the future; in each case over 90 percent of teachers indicated that they were "somewhat" or "very interested" in doing so. The resources seem to be more attractive to teachers in lower grades; elementary school teachers were most likely to report having used each of them in the past and were most interested in using each of them in the future.

**Figure 1: Teachers' Reported Frequency of Technology Use with Students**



## Students Use Technology Most Often to Create/Edit Written Text

Almost half of Maryland teachers (46%) reported that they regularly assign their students to use technology to write and revise text, and a third or more have their students use technology to gather information or data (38%), communicate or report information and conclusions (35%), or create graphics or visuals (33%) (Table 1). Less commonly, teachers indicated that their students regularly use technology to display data or information (25%) or plan, refine, or produce multimedia presentations (23%).

**Table 1: Student Uses of Technology**

*(Percent of teachers reporting that they regularly have their students use technology for this purpose)*

<b>Plan, revise, and publish written text</b>	<b>46%</b>
<b>Gather information/data</b>	<b>38</b>
<b>Report information or conclusions</b>	<b>35</b>
<b>Create graphics or visuals</b>	<b>33</b>
<b>Display data/information</b>	<b>25</b>
<b>Produce multimedia presentations</b>	<b>23</b>
<b>Communicate with others in/outside of school</b>	<b>17</b>
<b>Organize and store information</b>	<b>16</b>
<b>Perform calculations</b>	<b>15</b>

Teachers reported using technology for other purposes less frequently. For example, over half of teachers indicated that they never have their students use technology to develop an understanding of complex material, perform calculations, communicate or interact with others, perform measurements or collect data, or generate original pieces of visual art or music.

The Maryland Technology Inventory (MTI), conducted by the State Department of Education each year, asks administrators to report how students use technology in their schools. The findings of the MTI cannot be directly compared to those of this survey because the MTI surveyed administrators about activities in the school as a whole, while this survey asked teachers about their individual classes. However, both this study and the fall 2001 MTI found similar patterns in how students currently use technology in their classrooms.

## Time and Resources Are Biggest Barriers to Technology Use

When asked to identify the biggest barriers that they perceive to technology use in the classroom, teachers focused on two issues: lack of time and lack of resources (Table 2). Barriers related to time included lack of faculty release time for planning and practice (68% found this to be a "moderate" or "great" barrier), lack of time in the schedule for students to use computers in class (60%), and lack of time to identify worthwhile sites on the Web (56%). These obstacles were identified as particularly serious by elementary school teachers.

Barriers relating to lack of resources included lack of computers (57%) and unreliable or broken computers (52%). High school teachers found these obstacles more serious than teachers at other levels.

Other factors that were considered moderate or great barriers to technology use by more than 40 percent of respondents were their school's emphasis on testing (50%), lack of good software (47%), inadequate training opportunities (47%), difficulties in classroom management (45%), and lack of curricula that include technology use (45%).

There are also several significant areas that teachers do not find to be an obstacle. Over half of respondents reported that lack of administrative support, lack of Internet access, and inadequate TVs were not barriers to technology use.

**Table 2: Perceived Barriers to Technology Use**

*(Percent of teachers reporting that this is a "great" or "moderate" barrier to technology use in instruction)*

<b>Lack of release time to learn/practice/plan</b>	<b>68%</b>
<b>Lack of time in schedule for students to use</b>	<b>60</b>
<b>Not enough computers</b>	<b>57</b>
<b>Lack of time to identify worthwhile sites</b>	<b>56</b>
<b>Outdated, unreliable, broken computers</b>	<b>52</b>
<b>Major emphasis in school on testing</b>	<b>50</b>
<b>Lack of good instructional software</b>	<b>47</b>
<b>Inadequate training opportunities</b>	<b>47</b>
<b>Difficulty in class management</b>	<b>45</b>
<b>Lack of curriculum or lesson plans</b>	<b>45</b>

*For more information, contact Helene Jennings at ORC Macro ([jennings@macroint.com](mailto:jennings@macroint.com)), Gail Long at Maryland Public Television ([glong@mpt.org](mailto:glong@mpt.org)), or Jackie Nunn at the Center for Technology in Education ([jnunn@jhu.edu](mailto:jnunn@jhu.edu)).*