Using Technology to Enhance an Automotive Program

BY DENIS ASHTON

The PowerPoint curriculum itself is a gift of technology. The instructor is able to use still and video photography to enhance presentations using videos and photos he has created for his students. The use of projection systems, presentation software, the interactive student response systems and remote electronic computer control, as well as instructor voice enhancement, greatly **improves student attention, participation and learning.**

Denis Ashton uses technology in his automotive technology program at East Valley Institute of Technology (EVIT) to positively impact student outcomes.

"Technology is not only a tool that helps me teach," he says, "it helps me know if the student is really learning." Ashton, the department chair for the automotive programs at EVIT, in Mesa, Arizona, says that using an interactive PowerPoint curriculum makes learning fun for students and provides immediate feedback for the teacher. Not only does he know what percentage of the class "gets" it, but he also knows who isn't getting it, and if he needs to cover the subject again.

How it works

The system begins with a lesson on the screen so that the students are seeing the coursework as well as hearing it from the instructor. Once the presentation has been given, students are immediately tested on the content. Divided into teams, each student has an electronic key pad on his or her desk. A multiple choice question is flashed up on the screen and game show music is played while students enter their answers.

The results are immediate; the teacher and students can see who got the answer right and which team had the most correct answers in the shortest period of time. The winning team typically gets candy, or some inexpensive reward. But the real reward is to the teacher. If everyone got the answer correct, he knows he can move onto the next lesson. If there seems to be some confusion, he can go back and re-teach the content.

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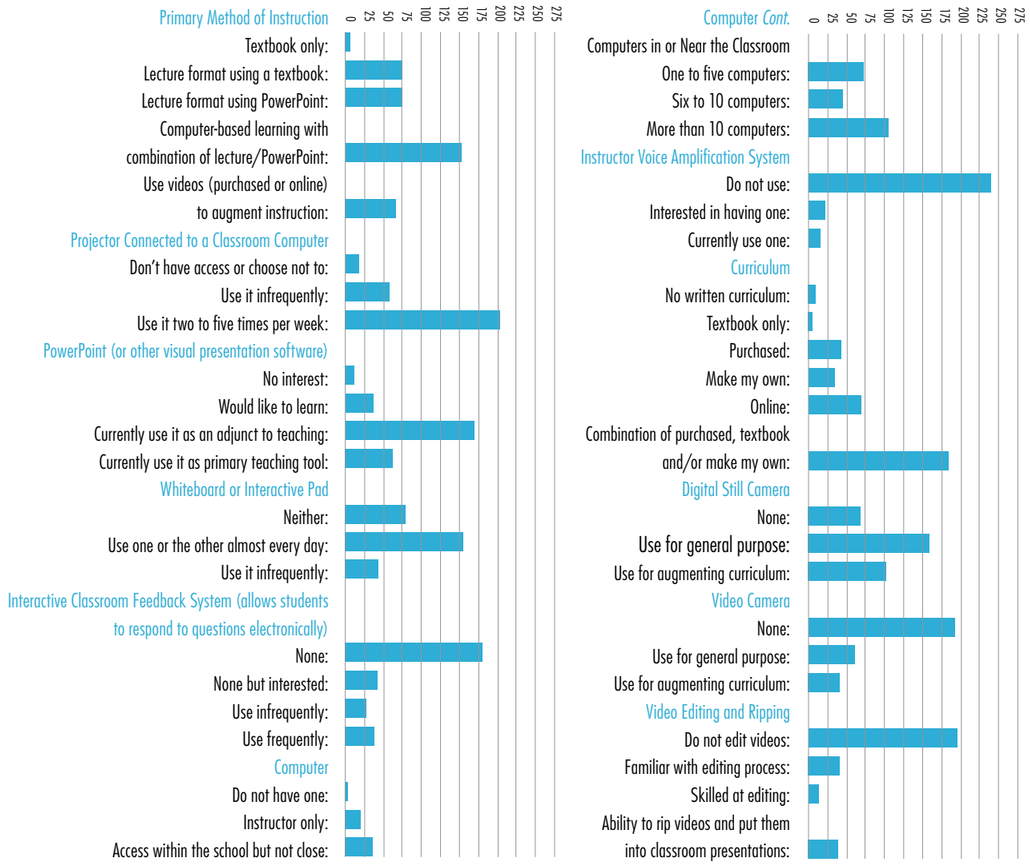
A Survey of Technology Usage

Ashton recently presented on technology in the classroom at the annual Automotive Youth Education Systems (AYES) Conference in Dearborn, Michigan. Nearly 400 predominantly high school automotive instructors from across the nation were in attendance. The focus of the presentation was to help instructors realize the powerful potential of technology to enhance student outcomes. As part of the presentation, Ashton gave a demonstration of the student interactive system with the instructors assuming the role of students. The presentation also included a hands-on workshop in which participants learned more about creating PowerPoint presentations and the use of Windows Movie Maker to edit instructor produced videos. (This included ripping



and editing commercial videos for use in classroom presentations.) In preparation for the presentation, Ashton and colleagues conducted an informal survey of the participants to determine what technology was currently being used. Of the 400 participants, 278 responded. (This was a unique opportunity to poll a sample of instructors from across the nation. Although they were automotive instructors, Ashton believed that a poll of other CTE instructors would yield similar results.) They were pleased to learn that only 19 out of 278 did not have access to the use of a projector which would make all of the education tools described easily available to them. The survey results show that automotive instructors around the country are using technology in their classrooms to varying degrees.

Technology can be an integral partner in helping to improve student outcomes by engaging students in their learning and facilitating the transference of knowledge from teacher to student. In Ashton's program, technology is helping students pay more attention to what is being taught, is encouraging their participation by bringing dynamism to the content, and is helping to improve student outcomes overall. T

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is an administrator and instructor of heavy duty automotive technology at EVIT. He has presented at AYES and ACTE conferences and has written two books. The books and his PowerPoint-based curriculum are available at **www.abariscurriculum.com**. He can be contacted through his Web site.

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FEATURE

By Alisha Hyslop

Developing **Technical Skill Assessments**

THERE HAS BEEN VIGOROUS DEBATE REGARDING THE MERITS OF VARIOUS ASSESSMENT APPROACHES AND ALTERNATIVES TO NATIONAL OR INDUSTRY EXAMS. THE ENTIRE FIELD IS WORKING HARD TO **INCREASE THE FOCUS ON TECHNICAL SKILL MEASUREMENT IN ORDER TO PROVIDE CLEAR EVIDENCE THAT CTE PROVIDES A UNIQUE VALUE TO STUDENTS.**

Perkins Implementation Spotlight Series

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ONE OF THE BIGGEST CHALLENGES FACING THE CAREER AND TECHNICAL EDUCATION (CTE) COMMUNITY AS IT WORKS TO IMPLEMENT THE 2006 PERKINS ACT is responding to more rigorous requirements for reporting on CTE students' technical skill attainment. The law requires that measures be valid and reliable, and the technical skill attainment measure is enhanced to focus on "career and technical skill proficiencies, including student achievement on technical assessments, that are aligned with industry-recognized standards, if available and appropriate."

The U.S. Department of Education suggested in non-regulatory guidance that states and locals use the number of CTE concentrators who passed technical skill assessments aligned with industry-recognized standards as their performance indicator to fulfill the new requirements. While there has been vigorous debate regarding the merits of various assessment approaches and alternatives to national or industry exams, 44 states have decided to use the non-regulatory guidance at the secondary level, and 33 states have made that decision at the postsecondary level. Even though some states have chosen a slightly different approach, the entire field is working hard to increase the focus on technical skill measurement in order to provide clear evidence that CTE provides a unique value to students.

Unfortunately, very few states have such a system of technical assessments in place. While efforts are under way at the national level to provide some assistance, many states are moving forward with efforts to increase their ability to accurately measure the skills students gain in CTE programs. Some states are working to develop a set of assessments based on their own state standards, some are looking to align with already existing national or industry assessments, and others are taking a combination approach. Georgia already had an assessment system in place at the postsecondary level, but there was no established, statewide technical skill measurement system in place for high school students. When the new Perkins law was passed, the state embraced the challenge to build an assessment system from scratch and began working furiously.

Mamie Hanson, grants program consultant with the Georgia Department of Education's Division of Career, Technical and Agricultural Education (CTAE), said state administrators "did a lot of research to see which approach would yield the best results for students" and considered a variety of assessment options. The question they ultimately decided to measure was, "Does a student have the necessary skills to enter the career pathway or occupational area and be successful?" It was determined that a more sustainable level of technical skill attainment could be measured after a student had completed a sequence of courses, which led the state toward an end-of-pathway assessment system aligned with its new "Peach State Pathways."

During the 2007-2008 school year, Georgia began identifying a system of