

Companies Targeting Low-Cost 'Netbooks' Directly at Education

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Computer companies are rolling out lower-priced laptops designed for education, claiming that the new "netbooks" are better tuned than past models to the needs of young learners—and to the constraints of school budgets.

The new models may help revive confidence in 1-to-1 laptop programs, which some school districts have backed away from in recent years because of the high cost of standard laptops, their unproven benefits to student achievement, and other problems.

The financial risks districts take in assigning laptops to all students and teachers can drop when the price is \$500 or less, rather than the \$1,000 apiece that school districts have typically paid for notebook computers.

"We're at a point, finally, where [low-cost notebooks] are worth investigating," said James P. Hirsch, the official in charge of technology at the Plano school district, in Texas. "Depending on your requirements, you might provide two or three times the number of units you would typically provide for students, at the same cost."

On April 8, Hewlett-Packard Inc. unveiled the Mini-Note, a "mini-notebook" that starts at \$499. An H-P official said the device is the company's first computer designed from the outset in consultation with educators.

One week earlier, Intel Corp. unwrapped the second version of its Classmate PC, originally intended for primary school students in "emerging markets" overseas. The new version, which is expected to cost from roughly \$300 to \$500, depending on features, will be available in developed countries as well as emerging markets.

The chip-maker dubbed the device a "netbook," a newly defined class of computers. The Taiwan-based AsusTek Computer Inc. also offers a \$400 netbook, the Eee PC, for education.

Netbooks share features such as being small, ultralight, and energy efficient, with rugged plastic bodies, compact keyboards, and built-in antennae that can tap into wireless links to the Web. They typically rely on Web-based access to other computers for major data storage and computer applications. Many don't have hard drives, but instead use less roomy but cheaper "flash" memory cards to save user data.

"If you're looking for mobility and a set of applications that are truly the most needed for student use—such as Internet access, and word processing—these machines can do that, and nicely," said Mr. Hirsch, the associate superintendent for academic and technology services for the Plano district.

But he warned that educators would be disappointed if they were seeking the “exact same equivalent of a full laptop or desktop. That’s not going to be the case.”

Speed Varies

Netbooks often come loaded with the Linux operating system, which is available without license—eliminating the significant charge for an operating system from Microsoft Corp.

They can run Microsoft’s Windows, and the Seattle-based software giant recently said it would postpone the phasing-out of sales and support for Windows XP until 2010, at least for netbooks. XP is the cheaper predecessor to Microsoft’s current Vista operating system, which demands more computing power to run.

Mr. Hirsch said the high-tech Plano district, which often takes part in corporate pilot tests, has evaluated prototypes of the Intel and H-P netbooks, as well as the XO and the Eee PC, in recent months. He said the speed at which they start up “to the point where you can do some work” diminishes from “blindingly fast” when using Linux to frustratingly slow when they run on Windows XP.

Agnes Kwan, a spokeswoman for Intel, said of the netbook, “It’s more of a PC that is for enjoying or consuming content on the Internet versus a more powerful PC used for creating multimedia content for the Internet, creating video, and using more powerful applications, such as Excel.”

No one has yet delivered a robust \$100 laptop, the stated target of the nonprofit One Laptop Per Child Foundation, which has enlisted corporations and governments to provide its computers to children in developing countries, with the ultimate goal of eliminating poverty. (“Cheap Laptops Getting Tryouts in Small Pilot Projects,” May 23, 2007.)

Currently being introduced in about a dozen poor countries, the foundation’s innovative green XO laptop costs \$188. Nicholas Negroponte, the leader of the nonprofit effort, has said the price will keep dropping as the scale of the project grows.

Mr. Negroponte, a guru of the digital age who was one of the founders of the MIT Media Lab at the Massachusetts Institute of Technology in Cambridge, Mass., was skeptical about the new category of computer.

“Netbook is marketing-speak,” he wrote in an e-mail last week.

Mr. Negroponte said the netbooks correctly emphasize communications, as does the XO. “What is surprising, however,” he added, “is the degree to which they are all cost-downs of normal office laptops, versus design-ups from new concepts of what children need for learning.”

While claiming that his organization deserves credit for “creating this new low-cost market, without question,” Mr. Negroponte did not relish comparisons to the netbooks and their for-profit producers: “[P]lease keep in mind that OLPC is

not a laptop project. It is a learning project. It never tried to reach kids by being only a bargain.”

No More ‘Leftovers’?

Don Knezek, the chief executive officer of the International Society for Technology in Education, based in Washington, said that K-12 education has long been served “leftovers” from technologies that were primarily developed for the business and consumer markets.

“It’s clear that OLPC and the XO effort have caused other providers of technology systems to feel some pressure—that’s a good thing,” said Mr. Knezek, whose group organizes the nation’s largest trade show for school-related technology.

“Out of that comes some real soul-searching, some customer- and market-sensing, and some decisions about what’s critical and what’s not, rather than walking along with something fat and nice and built for business,” he added. “It’s necessary to think about what we need for education.”

Hewlett-Packard’s new “mini-notebook” is the first of its computers “created by educators for educators,” said Kerry Smith, the company’s manager of public-sector marketing, referring to consultations during the development phase. “It’s not, for example, what researchers want.”

Educator input led to highly durable keys, multimedia tools, security features, and a built-in “accelerometer” chip, which automatically locks the hard drive if the machine begins moving rapidly—as when, for example, it is falling to the floor.

Educators also urged a “price point that allows a broader reach-in to the education community—students and school districts that haven’t been able to purchase such equipment before and software that’s out there that can advance learning in the classroom,” Mr. Smith said.

Though the Mini-Note was designed for schools, Saul Rockman, a San Francisco-based consultant and researcher, called it “the first machine for education that a business person would not be embarrassed to carry.” He added, however, that “by the time you add software to it, it’s going to be fairly expensive.”

The Mini-Note is being marketed to general consumers and business travelers as well as schools. Another new entrant for education, the second-generation design of the Classmate PC from Intel, is also pitched toward a broader market.

The device was introduced in 2006 as “a mobile personal e-learning device for primary students in emerging markets,” an Intel press statement says. Requires Adobe Acrobat Reader.

Intel does not bring the computers to market itself, but works with third-party manufacturers. Variants will be

manufactured in different countries by different companies, said Ms. Kwan of Intel.

Depending on features, the price should range from slightly below \$300 to over \$500, but should typically be about \$350, she said.

The Portland, Ore.-based CTL Corp., is now offering a Windows XP version, called the 2goPC Laptop, through online retailer Amazon.com Inc.

XO Pilots

Netbooks are, for the most part, untested in U.S. schools. But a couple of small trials of the XO have been launched in the United States since November.

One trial is planned by the Birmingham, Ala., school district, after the school board voted early this month to accept 15,000 XOs the city offered to buy for the 30,500-student district. "We always wanted laptops for our students, so it was exciting" to learn about the opportunity, said Claudia Williams, the district's chief academic officer.

The district will test-run the first 1,000 XOs this spring and summer with the students and teachers at Glen Iris Elementary School.

The details of the pilot program are still being hammered out, but Ms. Williams said the XO's design and tool set match the school district's constructivist pedagogy.

"I like the idea that the computer is equipped with programs, so that children have to create their own learning activities. It will allow children to be really creative, rather than sticking a program in and marking their answer, and that sort of thing," she said.

A smaller test of the XO has been under way since January at Kappa IV Middle School, in New York City, led by Teaching Matters, a nonprofit group that helps schools rethink their use of technology, usually through professional development.

The group has placed 60 XOs with 6th graders and their teachers at the Harlem school, which has had very limited access to technology, according to Lynette Guistaferra, the head of the New York City-based group.

The Kappa IV program aims to see how the laptops could support Teaching Matters' system for teaching writing to urban middle schoolers. The system involves a custom curriculum, a learning-management system, and Web-based resources, she said.

Ms. Guistaferra said the tentative results of the experiment are positive and that a final concern—“whether the 6th graders would take the [XO] device and throw it back at them”—has been put to rest. “This group of kids—some have access to technology at home but don’t have it at school—they were gleeful, absolutely ecstatic,” she said “and they stayed ecstatic.”