



Netbooks: A proposed alternative one-one program for grades 9-12

Costs

I've been asked to review the total cost of ownership (TCO) of our proposed netbook one-one solution to answer these questions:

What is the initial cost difference? \$500 Vs \$968. These prices are for bundles with extended warranties, accident protection, anti-theft, etc. Retail hardware cost is \$300 for the Dell, and Apple doesn't break that out. Apple does include a significant software suite with MLTI, and there is no dispute about that. It costs more and is worth more. (I should mention that the scale of our deployment magnifies unit cost as a factor. Every \$10 increase is \$22,000.)

Don't the MacBooks have a longer usable lifetime? This is a grey area. Portland operates both Macs and PCs in large numbers, and many are well beyond what anyone would call a useful life span. Over 7 years is common for both platforms. Each will go five years in terms of obsolescence, and in my view we should not expect either platform to carry us beyond that. When we do it creates problems for both. (The iMac 400s do seem to have 9 lives, but they do not run current software, and today that includes browser plug-ins, etc.)

Doesn't the state software bundle have a higher value? Yes, it does. This is a fascinating area where I think the new model will provide opportunities. By using free and open source software, and web-based resources, we will increase our flexibility to manage and provide learning tools. The MLTI program has an excellent and heavily discounted software bundle, so we certainly aren't competing there.

Aren't Macs much cheaper to network? It is a long-held axiom that Macs are cheaper to network. Actually it depends a lot on your network. A certain type of Mac installation (run by non-technical people without a lot of bells and whistles) can cost a lot less to run. Our network has thousands of both in a fairly complicated environment, so platform choice does not affect cost much in our case.

What about electricity costs? I believe we will come out way ahead there. The Apple equipment does not go a full day on a charge, so it is necessary to set up charging areas or carts. Carts would cost \$100,000 - \$200,000, and they need power (in many cases new circuits.) If you don't use carts, you still need charging areas such as a shelf in the cafeteria with new power, etc. The netbooks have a battery that should last for a school day. Students will be expected to bring them in charged. (This does not mean we won't have charging problems, but I believe they will be more manageable, and I am certain there will be less energy used at the school buildings when compared to MLTI.)

Aren't training costs higher doing it without the state? This is a very large part of any technology initiative, but most of it is provided locally and the planned training will not differ much with the netbooks. Teachers will continue to learn to transform their instruction using new tools and resources, including the online course management system, WordPress teacher web pages, ePals (global email,) and a variety of new learning resources. Many teachers are familiar with Windows, so there is no extra cost in teaching the operating system.

The state provides training for MLTI, and some of that relies on the Apple software, so there will be some mismatches. This lack of compatibility should not be overstated, though. Many of the high profile state initiatives associated with MLTI involve applications that work fine with the netbooks (Google Apps, ePals, FlexBooks electronic textbooks, Open Educational Resources, etc.) so there is a lot of continuity with the state program. It was the MLTI's success that taught us the importance of one-one, and we are still participating in and building on that success.

Ability to provide student with an enjoyable and productive learning environment:

This goes way beyond what technology is used, but is an opportunity to discuss platform from a learning point of view. Most students can use about anything, and many of them already use LINUX, open source, Game console browsers, cell phones, etc. The MLTI MacBooks provide DVD and photo editing. The netbooks do not, but they do allow media rich collaborations using video, sound clips, podcasts, forums, etc. (often referred to as “web2.0” applications, because users produce and participate, rather than just consume media.) There are other “enjoyable” aspects of the netbooks. They weigh less and the batteries last longer. They have cameras, microphones, and a full suite of PC ports.

“Numerous studies have been made showing that Macs are *significantly* less expensive [over time] than comparably equipped PCs.” Are you aware of this?

I am very familiar with the studies mentioned above and I agree with them. I have generally supported Mac hardware over comparably equipped PCs, in part for that reason. I have been involved in Mac support and purchase decisions since 1989, about twenty years. I strongly supported our effort to obtain MacBooks for high school students through the MLTI, but it ultimately failed due to cost constraints. This meant that the students could be without access to their own devices for online use in the fall. This is an educational issue. If you put yourself in the place of a teacher, how do you assign Internet homework knowing that half of your students do not have access to a decent computer? A one-one ratio of devices is essential for 21st century instruction. That is the starting point.

I want to be clear... we are not saying this is something similar for less money. It is something different, with fewer features, that costs less. I believe these are well made small PCs. Also, please remember that large technology systems are complex and each have their own processes with associated costs. Neither platform would “win” on every point, and no solution is automatically the best for every situation. We may never agree on whether this is the right decision, but I do hope to refute the charge that it is *uninformed*.