

## 7) Provide the appropriate tools to all students and teachers

*“In a digital world, students need to learn to use the tools that are essential to everyday life and workplace productivity.” (Learning for the 21<sup>st</sup> Century, Partnership for 21<sup>st</sup> Century Skills)*



**“Education is the only business still debating the usefulness of technology.”**

*Rod Paige  
US Secretary of Education*

Our guiding principle for teaching methods requires that teachers “create instructional environments where students use higher order cognitive skills to construct meaning or knowledge, engage in disciplined inquiry, and work on products that have value beyond school.” The choice of hardware and software must support this goal of reforming teaching and learning practice. The laptop computer and accompanying software selected for this project must, first and foremost, form a cognitive tool enabling students to create meaning in real world contexts using real world media. Three factors must be considered for this to occur.

First, the laptop computer itself must be capable of the production demands of real world projects. It should be sufficiently powered to allow for video and audio editing as well as multimedia production. It must also have necessary ports (USB, FireWire, etc.) to connect to other digital devices such as video cameras or scanners. The screen resolution should be sufficient for productive tasks. The laptop should also be lightweight so that it can easily be transported around the school or to the students’ homes and it should have adequate battery life.

Secondly, the installed software should be adequate to the task of content creation. A full range of software should be available that enables the student to do word processing, concept mapping, spreadsheets, audio, photo, and video editing, multimedia authoring, Web browsing, and communication. As much as possible, software should be chosen to allow maximum integration among the separate programs.

Third, the student should have access to the laptop whenever it is needed. Students who have access to computers at home and at school have shown an increase in writing skills, a better understanding of math, greater problem solving and critical thinking skills, ability to teach others, greater self confidence and self esteem, and more confidence with computer skills (Coley, 1997; Rockman & Sloan, 1995). To reserve the use of the laptop to the school setting is to waste more than half of its potential use by students.

**□ Guiding principle:** Laptop hardware and software must be sufficient to allow students to be creators of content, not merely passive receivers of content. The laptop must be available to use as a cognitive tool wherever and whenever the student is working.