Technology in Classroom
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The advances in educational technologies are able to contribute in accomplishing various levels of cognitive objectives. The learning skills are redefined in the 21st century to emphasize more collaboration, innovation, critical thinking, and problem solving. Effective teaching demands more student-centered instruction to better prepare students to succeed in the digital world after matriculation. To meet the needs, the educational community is trying to prepare teachers who can be effective in the classroom. While these training programs at the public school level are coordinated and supported federally, at the college level, they are mainly driven by the discretion of professors and administrators. The results from recent progress reports are very discouraging. (Technical Report on Professional Learning in the Learning Profession 2009, School Redesign Network at Stanford University, CA)

With the increasing number of distractions such as cell phones, iPods and iPhones, instructors face even more challenges to keeping students' attention spans long enough to teach a concept. Instructors must capitalize on the benefits of the latest affordable technologies for instruction to keep their students focused and attentive in class. While there are several effective tools available for instruction, in a recent survey, one tool which stands out clearly is the Interactive Whiteboard. In classrooms where this tool is used, "Do not erase" or "Hold on please" does not exist. The instructor is able to spend more time on instruction, reviewing and engaging students in various activities, and students are more focused and motivated to learn. The students can access learning material beyond the class hours.

Interactive Whiteboard (also known as the electronic whiteboard). The interactive whiteboard is based on touch-screen technology. It consists of mainly three components: the computer, a projector, and an electronic whiteboard (live/active screen). Few models offer integrated systems and wireless communication among the components. The electronic whiteboard is connected to the computer which is connected to the projector. When projected, the electronic whiteboard works as an active computer screen and allows the user to control the computer. Though brand specific software will allow one to perform additional functions, there are several features common to most of the electronic whiteboards such as color annotation, presentations, predefined shapes, saving/recording the entire session, controlling the web-

browser, printing saved lessons, and accessing other resources. The in-class notes, saved in various formats, can be uploaded to a course-management system (for example, BlackBoard) to make it available from anywhere at anytime. The same features can be accomplished if a tablet PC or a touch screen monitor is used with a projector and a non-interactive whiteboard. In this case, one has to write on the touch-screen monitor and control the computer from this screen.

Integration of whiteboards with other digital teaching tools. The parent companies of electronic whiteboards also carry several other educational technology tools which can be integrated with their electronic whiteboards such as document cameras, personal response systems, digital slate, and class management systems. These features make the instruction more engaging and effective. Some of these tools assist the instructor in conducting formative and summative assessments, which can create "teaching moments" for instructors.

Benefits of using an interactive whiteboard in instruction. Availability of in-class notes beyond the class hours allows students to catch-up after class for any missed notes, and they do not have to ask the instructor to wait until they have copied what has been written on the board in a traditional classroom setup. In fact, the students can be asked not to copy what the instructor writes on the board, but to interact and engage in question-and-answer sessions, as the notes from the electronic board will be available in the instructor's handwriting soon after the class. Engagement, motivation, and opportunity for accurate review of the instructor's notes will increase the retention of knowledge. The instructor can save in-class time by using ready-made lessons, images and figures, and make them available to students before and after class hours. Interactive worksheets and projects can be created.

The following are **URLs for Interactive whiteboards:** 3M: **Digital Board** – http://solutions. 3m.com/wps/portal/3M/en_US/Meetings/Home/ProductsAndServices/Product_ Catalog/Digital_Board/; Hitachi: **Star Board** - http://troxweb.teamtroxell.com/ www/product.htm?User=&Sessn=&1s1=6&1s2=53; Numonics: intelliboard - http://www.numonics.com/; Panasonic: **Panaboard** – http://panasonic.com/ business/office/pro_whi.asp; Polyvision: **eno** - http://www.polyvision.com/ LeftNav/Intheworkplace/Interactivewhiteboards/%C4%93nointeractivewhite board/tabid/100/Default.aspx; Promethean: **ActivBoard +2** – http://www.pro metheanworld.com/ server.php?show=nav.17512&cmp=pdus; **SmartBoard**: http://www2.smarttech.com/st/en-US/Products/SMART+Boards/; Team Board: EasiTeach - http://www.teamboard.com/education.php. The **Portable Interactive whiteboard** unit converts any non-interactive whiteboard into an interactive one. Like other interactive whiteboards, it also uses a projector and computer. The product is capable of turning the projected image into working digital space. Some of the products use Bluetooth technology. A stylus (an electronic pen) is used to write and activate an application on the screen. It records whiteboard notes to the computers, which could be broadcasted over the internet in real-time. URLs for some of the portable interactive whiteboard are: **e-beam**: http://www.e-beam.com/products/whiteboard.html; **Mimio**: http://www.mimio. com/products/mimio_board/index.asp; Quartet: **IdeaShare** Interactive WhiteBoard - http://www.acco.com/quartet/IdeaShare/index.html.