

## Gather 'Round the E-Chalk Board

Summer 2007

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### Overview and Definition

Interactive applications involving students in lively participation in the learning process are gaining widespread popularity across all fields of instruction. Electronic or interactive whiteboards are presentation boards attached to computers; essentially they are huge computer screens. Software running on the computer is projected onto the board where it can be seen and manipulated from both the pc and the board. Notations, comments, diagrams, and other information written on the board can then be captured and printed, emailed, and/or saved to be distributed to the participants. Electronic whiteboards can take library instruction from show-and-tell sessions to shared, dynamic learning experiences.

### Basis for Current Interest

Changing instructional methods focus on the student, making them active partners in the teaching and learning process. Student feedback following library instruction sessions underscores their interest in interactive opportunities during such sessions. Electronic whiteboard technology provides opportunities to release the instructor trapped at a pc at the head of the class controlling the learning process and engages the students to encourage participation, discussion, and collaborative learning opportunities. In addition, current research into the habits of Net Generation learners indicates that our students prefer the team approach to learning, absorb material in a visual manner, and expect information at their fingertips. Interactive whiteboards allow librarians to create and manage inquiry-based sessions that capitalize on these traits.

### Hype Cycle / Mainstream Adoption

"A Hype Cycle is a graphic representation of the maturity, adoption and business application of specific technologies. Since 1995, Gartner has used Hype Cycles to characterize the over-enthusiasm or "hype" and subsequent disappointment that typically happens with the introduction of new technologies."

<http://www.gartner.com/pages/story.php.id.8795.s.8.jsp>

The interactive whiteboard occupies a somewhat unique position in the Hype Cycle. While the first board was introduced in 1991 by Smart Technologies, it is still relatively cutting edge in higher education. Electronic whiteboards have been widely adopted in K-12 education and for business applications and are probably entering the "plateau of productivity" there.

### Current Applications in Higher Education

In higher education, interactive whiteboards have particular applicability to distance learning. The board allows students to work and learn in a shared space regardless of physical location. The touch-sensitive screen and hands-on approach to learning promoted by the electronic board is especially useful in teaching software packages and applications specific to particular disciplines. New versions of the electronic whiteboard support interactive response systems (clickers) which allow for instant gratification in getting feedback, surveying, and/or quizzing students.

### Current Applications in Academic Libraries

The interactive whiteboard offers the same potential value to library instruction sessions as to any other teaching and learning activity. The board provides students with opportunities to develop their own strategies for cooperative learning within a team-based approach. For course-integrated instruction, the whiteboard is an excellent resource for collaborating with the class instructor in developing the library session, creating targeted instruction based on the subject matter, and then saving and deploying the results of the session through course-management systems, web pages,

pathfinders, email, etc. In addition, as students are interested in not only finding information but then using it in productivity packages as well, the interactive whiteboard allows for additional teaching opportunities there.

## Potential value

Some particularly useful aspects of the electronic whiteboard in library instruction include:

- Increased active learning and interactivity by and among the students – they can control the display using their fingers as the mouse on the board or pass a wireless keyboard to use resources, software applications, etc.
- Boards are equipped with multi-colored styli to highlight and emphasize information. The addition of color adds value and interest.
- Notations, comments, highlighted areas and drawings can be captured and then distributed to participants, and posted to course-management sites.
- The boards offer opportunities for experimentation and exploration in a group-learning situation as the instructor manages and extends dialogue.
- Electronic whiteboards may aid in concept mapping, a technique for assisting and enhancing many types of learning and thinking.
- The board is adaptable and allows instruction to move beyond a canned presentation to the boundaries of the imagination of the participants.
- Electronic whiteboards accommodate different learning styles; kinesthetic learners enjoy the touch-sensitive screen, visual learners benefit from the entire experience, and aural learners will find the ensuing conversation useful.
- The board can create a shared-learning space regardless of the physical location of the participants.
- In instruction sessions where there may not be enough computers for every student, participants may easily work at the board, around the keyboard, and together in groups.
- New versions of the whiteboard support an increasing array of peripheral devices so that rare materials, primary source documents, etc. can be viewed on the board, analyzed, highlighted, and annotated.

- The instructor is released from being stuck behind the computer and is able to move around the class.

## Potential hurdles

- There is a learning curve associated with effective use of whiteboards. The board requires sustained use and implementation for an instructor to maximize its capabilities.
- It takes some time for an instructor to learn how to effectively incorporate an interactive whiteboard into instructional sessions. The emphasis is not on the technology but on the learning it can facilitate. It's not just a cool blackboard.
- Integrating the whiteboard into an instruction session requires that the instructor be flexible and able to spontaneously incorporate the ideas being generated by the students.
- The costs are not inconsequential. Whiteboard prices start around \$1,500 and with the addition of a digital projector and other peripherals the price can climb much higher.
- Classroom size and shape may not be optimum to accommodate the use of a whiteboard.
- For those with visual impairment, the board's white background may cause contrast problems.

## Further Readings

1. Branzburg, Jeffrey. 2006. Use an interactive whiteboard. *Technology & Learning* 26 (6): 31.
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3. Grimes, Douglas, Mark Warschauer, and Tara Hutchinson. 2006. Civil engineering education in a visualization environment: Experiences with VizClass. *Journal of Engineering Education* 95 (3): 249-254.
4. Milanovic, Zoran. 2006. Lecturing with a virtual whiteboard. *The Physics Teacher* 44 (6): 354-357.