

Painting on an Electronic Easel: Strategies for Using a Smart Board in Library Instruction

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In 2013, Grand Valley State University opened the new Mary Idema Pew Library Learning and Information Commons, an innovative space designed to promote and support student learning in non-traditional ways. One of the features of this new building is a learning lab with an interactive whiteboard (IWB). As a former high school history teacher, I had taught with an IWB in my classroom and was comfortable with the use of this technology at the secondary level. However, using an IWB to teach information literacy skills to college students represented a new challenge and made me rethink my approach, building off my previous experience to create engaging lessons for undergraduates.

Often referred to by the brand name “Smart Board”, IWBs are becoming more common in higher education. Originally designed for corporate settings in the early 1990’s, interactive whiteboards caught on quickly in K-12 education, with many districts now featuring IWBs in nearly every classroom (Young, 2002). Students graduating from these technologically-rich high schools come to campus with the expectation to experience the same level of interactivity (Young, 2006). As many colleges and universities have begun to add IWBs, a growing number of academic libraries have also started to feature this technology. A 2012 Association of Research Libraries survey found that 49% of institutions (30) reported that they currently offer or plan to offer IWBs, with an additional 11 institutions featuring this technology elsewhere on campus (Ochoa & Caswell, 2012). As IWBs become more common, librarians need to be prepared to incorporate this tool into their instruction, effectively utilizing the unique technological benefits available to help create engaging, student-centered information literacy instruction sessions.

Impact on Student Engagement

There is a wealth of literature on the impact of IWBs, most of which centers on anecdotal evidence linking this technology to increased student engagement. Glover and Miller (2001) found the use of IWBs increased student motivation as teachers were able to accommodate multiple learning styles by seamlessly incorporating web links, audio files, videos, and images into lessons. In their 2011 study, Xu and Moloney found that undergraduate students appreciated the participatory nature of the IWB and had an “appetite for and enthusiastic response to innovative teaching” (p. 26). These college students did not view the IWB as being juvenile but rather embraced the interactive and collaborative nature of class activities. Schroeder (2008) found that his university students also responded positively to an IWB, reporting that it captured their attention and motivated their work. Ball (2003) noted that student engagement may also be enhanced by an IWB as this allows the teacher to face the class directly as opposed to being stuck behind the computer connected to an overhead projector—a common dilemma for many librarians while demonstrating the use of a resource.

It is important to note that while increased student engagement may very likely lead to higher attainment levels, there is little empirical evidence to suggest that adding an IWB will subsequently raise student achievement (Glover et al., 2007). A teaching tool, no matter how flashy and technologically advanced, cannot provide an adequate substitute for sound pedagogy.

Using an IWB

While there are differences between brands, the basic IWB includes a large screen resembling a standard whiteboard that can be manipulated through the use of included tools (stylus and eraser) and increasingly, through one’s own palm and fingers. Perhaps the most important component of an IWB is the software that accompanies it. IWB software varies from brand-to-brand, but generally resembles Microsoft PowerPoint, allowing the user to create presentational slides. While you can project PowerPoint slides onto an IWB screen, these slides will be static and immovable— you and your students will not be able to interact with the screen any more than a standard projection display. Slides created using IWB software, however, can be manipulated and interacted with, allowing for a variety of creative uses. “Knowing what tools you have available to you (and where to find them) leads to a much greater sense of mastery with your IWB, making you much more likely to use the technology in creative and spontaneous ways” (Betcher & Lee, 2009, p. 64).

Strategies

“Drag-ability”

Unlike PowerPoint, IWB software allows for the creation of moveable text and objects within a slide. “Drag-ability” allows students to move items and text boxes with a finger or stylus. By creating movable objects and text boxes you can easily create a variety of interactive applications:

- Create a rectangle of a certain color with chunks of text of the same color “hidden” within the shape—students can then drag out words to add an element of surprise and randomness to group assignments. Try incorporating this feature into activities where each student group is assigned to explore a database on their own and report out—rather than the librarian assigning the resource, students can drag out the database they are responsible for exploring.
- Create multiple text boxes scattered randomly across the screen with bold category headings at the top—students can then drag a given piece of text into a category it belongs to. Try using this to engage students with determining the difference between primary and secondary sources. A variety of descriptions of either type of source can be randomly spread across the screen with students responsible for figuring out whether a given description belongs in the secondary or primary category and dragging it to that

area. If you lock the category headings in place (usually by right clicking), students will not be able to accidentally move them.

- Create a sentence with blanks and a bank of text boxes that students can drag into the appropriate blank. Try using this to teach Boolean operators by creating blank search boxes connected with AND, OR with a bank of keywords and synonyms that students would place in the appropriate search boxes.
- Create layered text and objects—students could drag words to a matching box, with correct words overlaid on top of the box layer so they remain visible and incorrect words layered behind the box so they disappear. Try using this to help students learn to distinguish various forms that plagiarism can take.

Theatrical Tension

Having each student in the classroom interact with the IWB is tricky—it can be time-consuming and there may be a couple of students who hesitate to engage in front of their peers. However, by using an IWB in conjunction with group activities and competitions, you can engage the classroom through what is referred to as “theatrical tension”—a shared sense of suspense and curiosity. Try dividing the class into groups, with each group designating their own spokesperson. Then, when facilitating an activity involving the IWB, each group discusses their decision amongst themselves with their spokesperson coming up to the screen to drag, write, or interact in the way the group had decided upon. Boost engagement by assigning points (for instance, layering numbers behind moveable text/objects) to create a more competitive and suspenseful environment—holding the interest of students not immediately interacting with the IWB.

Tools & Multimedia

Aside from creating slides filled with drag-able content, most IWB software includes interactive add-ons. Search through the software folders to find objects such as: dice that can be rolled with the touch of a finger; stopwatches and timers; coins that can be flipped; game board spinners; and more. Most of these items can be customized so that the dice could have the names of various databases, search techniques, or anything you would want randomized for instruction. Some IWBs have Jeopardy templates and other customizable games included for easy and entertaining informal assessments.

Brainstorming 2.0

A common teaching technique (often at the beginning of a class) is to have students brainstorm ideas for a given prompt with the teacher jotting down the ideas called out on a whiteboard; for instance, a librarian asking students how they would define “research”. Take this activity to the next level by utilizing the IWB, writing ideas down with the stylus and taking advantage of the variety of colors available to help categorize and organize student ideas. When the ideas have been collected, capture the output using a screen capture tool—preserving student ideas to email back to them after the class is over.

Word Processor Integration

Most IWBs are compatible with word processors like Microsoft Word and allow users to highlight, underline and annotate the text in a document on the IWB screen. Depending on brand, users may also be able to type text directly into the document by using a large on-screen keyboard. This functionality provides engaging possibilities for lessons discussing plagiarism in a given piece of text or working on how to effectively integrate sources into a research paper. Remember to keep the text fairly short and zoom in on the document or pass out print copies so students will not have difficulty seeing them.

Potential Problems

Not Practicing

It cannot be emphasized enough that without proper preparation and training, an IWB can quickly become nothing more than an expensive blackboard. In order to effectively engage students, a librarian must devote time to learning how to use the IWB and how its interactivity can be effectively incorporated into a lesson. Students are quick to notice a teacher’s lack of confidence or ability using technology, making proper preparation and practice essential (Glover et al., 2005).

Not Rethinking

IWBs have been shown to increase student engagement and motivation, but only when used interactively in a student-centered environment. One of the biggest problems teachers have with IWBs is that they fail to rethink their approach and this tool ends up actually reinforcing traditional teacher-centered direct instruction. Many teachers have a tendency to dominate the lesson, using the IWB themselves and not involving students in this interactivity with technology (Kearney & Schuck, 2008). Avoid this problem by rethinking your pedagogical approach, perhaps moving beyond your instructional comfort zone, in order to create an interactive lesson involving students. Be flexible in your lesson outline, allowing time for students to “play” with concepts that interest them. The advantage of IWB interactivity is the ability of the class to go on quick explorations and tangents, clicking right on the board to easily explore different websites, images, and multi-media.

Not Saving

Failing to take advantage of the ability to save would mean missing out on an important benefit of IWBs. Locate the save, screenshot, and record features on your IWB before teaching. Save ideas and notes during a lesson—there is no need to constantly erase as you would with a basic whiteboard, simply add more slides for more content as you go. IWB functionality also allows you to record entire lessons as they happen (many brands include audio). You could then upload these recorded lessons for students to refer back to as well as for your own assessment purposes. If you would like to create online tutorials, the recording feature may also be used in a pinch to replace screen recording tools such as Camtasia or Screnr.

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scene if the other actor said something like, “I’ve never seen you before in my life” (Barton, 2012). In improv, the other actor would embrace the first with open arms, and call him brother in return. Taking this a step further is the principle of “Yes, and...!” Not only should an actor accept any new information they are given, but also consider what they can add to the scene. In teaching, think of this as how you can keep the conversation going in class. How can you build upon what a student has said, or use it as fodder for further conversation?

Accepting the improv principle, “Everything works!” can be applied to embracing the uncertainty of the classroom. In improv, anything is fair game; there is no such thing as a “mistake,” only an interesting turn of events (Barton, 2012). This can be a helpful mantra in the classroom when things don’t go as planned, either because you’ve gone “off script” or because a student has done something unexpected. Instead of thinking about these situations as mishaps, treat them as twists or turns, nothing more than new Obstacles you need your Tactics to out-manuever. In this way, we can feel more comfortable giving up control, going with our instincts, and allowing things to happen more organically while we’re teaching.

Adopting improvisational techniques like these can help you let go in the classroom and teach in a more carefree, authentic way (Tewell, 2014). This translates to not only greater confidence in the classroom, but also the ability to leave more space for your students to communicate and interact with you as you teach.

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Not Sharing

As previously mentioned, IWBs have been a part of K-12 education for some time and as a result there is a large collection of teacher-generated lesson plans available both online and through IWB software. While there are some options for school media specialists, there is very little available for academic librarians. As you develop lessons utilizing IWB features, be sure to share these to help build a collection of activities specifically designed for librarians working to build information literacy skills at the post-secondary level.

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Conclusion

For many of us, our roles as librarian and teacher have become intrinsically linked. Taking the time to consider and conceptualize our goals and intentions as teachers have a positive impact on the connections we make when we’re in the classroom. These theoretical, yet practical, examples from theater demonstrate how learning to be better performers can help us be better teachers, no matter which part we’ve been asked to play.

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