Interactive Whiteboards Should be Used by Motivated, Trained Educators to Improve Practice in the Classroom

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An interactive whiteboard (IWB) can be an effective tool in the arsenal of tools a teacher uses to develop effective practice in the classroom. There is evidence that IWBs improve student performance when teachers are properly trained (López, 2010), that IWBs can lead to a greater degree of student interactions in a safe learning environment (Smith, Higgins, Wall, & Miller, 2005), and that the safe learning environment along with the ability to express thoughts and ideas visually can aid in the connection of prior knowledge to new knowledge (Smith et al., 2005). There is also evidence that the greatest benefit of IWBs occurs when it is introduced as a disruptive technology that doesn't replace a competing technology (López, 2010). Based on this evidence, interactive white boards should be used by motivated and trained teachers because they will support effective practice in the classroom.

DO INTERACTIVE WHITEBOARD SUPPORT PRACTICE PRINICPLES?

The use of IWBs in the classroom can be used to conduct practice in a more realistic context. According to Clark and Mayer, interactions that require students to respond in a realistic context will promote learning that can be retrieved at a later time (Clark & Mayer, 2008). Practice on an interactive whiteboard can be developed to model reality better than more traditional forms of practice. During simulations, graphical representations of real objects and processes can be manipulated directly, and the effects of that manipulation can be seen instantly.

The ability to scatter practice throughout a lesson is not a unique feature of IWBs, but IWBs do allow you to add practice whenever it is appropriate. The greatest benefit of practice occurs during the first few practice sessions (Clark & Mayer, 2008). By using an IWB, effective practice can occur throughout a lesson, and because of the speed with which feedback can be generated, the amount of practice can be modified depending on the degree of progress the students make. Effective practice requires you to use written directions for responding to practice

questions, for the written text to be in close proximity to any graphics, and to limit extraneous elements (Clark & Mayer, 2008). Interactive white boards give the educator the ability to control all of these aspects of the practice. According to Clark and Mayer, transitioning from worked examples to practice is important because it frees mental capacity for building a mental model (Clark & Mayer, 2008). The whiteboards can certainly be used to facilitate this process.

Feedback is an integral part of learning. Students have to know what they are doing right or wrong. Using IWBs, the students can all see the context of the practice, and the results of their decision at the same time. When feedback is given in this situation, the feedback can occur in varying degrees. The teacher can give feedback directly, explaining why the result is incorrect, or can direct students to analyze as a group whether the work was done correctly, and if not, how to modify the work in order to improve the result. During simulations, the feedback can come from the simulation itself, and then students in the class can discuss whether this was the expected outcome, and why or why not. This type of interaction can improve student engagement in the lesson, and students can work more collaboratively to learn from each other. Surveys of students and teachers show that there is anecdotal evidence that IWBs can provide positive feedback directly (Smith et al., 2005). IWBs can provide feedback more rapidly and more frequently to measure student progress through a lesson (López, 2010).

WHO SHOULD USE INTERACTIVE WHITEBOARDS?

Interactive whiteboards are an expensive tool for use in the classroom. Initial and recurring costs include the interactive whiteboard hardware, software, training, and maintenance. Many teachers are already using technologies that can have the same effect as an interactive whiteboard. The greatest benefit to learning has been observed when IWBs have been implemented in classrooms where no competing resource is currently used (López, 2010).

Training in the proper use of interactive whiteboards is also essential. In the Round Rock Independent School District, improvements in the performance of English Language Learners were observed when interactive whiteboards were used. Their plan included significant training in the proper use of interactive whiteboards (López, 2010). Training and support is reported to be one of the most frequent issues in the use of IWBs (Smith et al., 2005). It is this author's experience that teachers must be receptive to a new technology. If a teacher is already effective using their current methods, the interactive whiteboard will be a competing technology that will not significantly improve the practice in their classroom.

References

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