

Q. How Smart Is A Smart Board?

The Need for Interactivity

Teachers strive to reach all students and help them to be successful learners. We have high demands placed upon us and in turn we place high demands upon students. We are charged with the task of creating 21st century learners from the very beginning.

An increasingly popular concept in the teaching world is

Universal Design for Learning, creating an environment that is successful for all learners. It's easy to understand that students are not all at the same level. Their ages, risk factors, experiences, and learning styles all affect their learning. In my classroom, I am very dedicated to differentiating instruction, and the concept of Universal Design fits with this philosophy.

Teachers striving for success for all students can use multiple means of representation of a concept in order to connect with all learners. Reading a textbook and listening to a lecture aren't the best way for everyone! Media has been available to teachers in audio and video forms for many years, but some newer technology is allowing us to incorporate this media and more into lessons in ways like never before. Media choices are now available for interacting with material that can be adapted to meet all visual, auditory, and sensory needs of students.

In addition to multiple means of accessing material, universal design also calls for different means of expressing learning, through sight, sound, and touch. Hand-writing answers to questions or taking a multiple choice pencil and paper test would not meet these criteria, but interacting with material using newer technologies such as interactive whiteboards can meet this need. Find out more about Universal Design at <http://www.cast.org>.

Interactive whiteboards (i.e. Smartboards*) can be considered a newer technology that allows demonstration of and interaction with content including all of those senses. In fact, teachers (including me) report successful learning of grade level material by all students, included labeled special education students or students with sensory or auditory deficiencies when content is shared using an interactive whiteboard.

**For the purposes of this analysis, I use the term Smartboard because I am familiar with that brand of Interactive Whiteboard and the accompanying software. The methods of teaching using an interactive whiteboard apply to boards produced by other companies as well.*



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Smartboards, Teachers, and Students

I strongly believe that you cannot just stick a Smartboard in a room and have it magically create a great teaching and learning environment. If a classroom or school is struggling but staff development is the problem, then a new technology would not be the solution. It is critical to have as many of the following in place as possible for the greatest success in a classroom, with OR without a Smartboard:

<p style="text-align: center;"><u><i>The Teacher Has...</i></u></p> <ul style="list-style-type: none"> • High expectations for students • Excellent understanding of teaching and learning • Positive attitude toward students and technology <ul style="list-style-type: none"> • Strong planning skills in goal-oriented curriculum • Support available to work out kinks along the way <ul style="list-style-type: none"> • Time available to plan and try lesson ideas 	<p style="text-align: center;"><u><i>The Learner Is...</i></u></p> <ul style="list-style-type: none"> • Engaged in curriculum-related activities <ul style="list-style-type: none"> • Aware of the purpose of curriculum-related activities • Skilled at cooperating with others to learn
<p style="text-align: center;"><u><i>The Subject Matter Can Be...</i></u></p> <ul style="list-style-type: none"> • Skill-based (demonstration and practice of learned material) • Higher-order thinking (use the board to stimulate discussion) <ul style="list-style-type: none"> • Any subject • Any grade 	<p style="text-align: center;"><u><i>The Setting Is...</i></u></p> <ul style="list-style-type: none"> • Supportive to all learners • Arranged to promote collaboration and discussion

Many of the ideas in the above table are inspired by the article, "Teaching," by Jere Brophy. In order to teach effectively using a Smartboard, a teacher must understand these concepts and be able to apply them to all of his or her teaching situations. I've also included a few technology-specific qualities which are critical for a teacher to use a Smartboard successfully.

The Smartboard Solution

Teachers can use a Smartboard and build a unit of study that includes many interactive components to engage all learners. The Smartboard can transform a mundane, didactic-type unit and make the content more appealing to all. Consider the following unit:

Before Smartboard

If I want to teach a lesson about cultures and family diversity, which is a 1st grade social studies unit in our state, there are a number of ways the class might approach this together. Traditionally, I might read a library book and give a short lecture followed by class sharing about families. We may create some sort of diagram together showing similarities and differences between families. As I write on the chart, the 1st graders start to turn to each other and begin to lose focus, thinking of gym class that is coming soon. The lesson is successful for average learners - those able to focus their attention, see the book, and participate in the discussion. Several learners, maybe even unbeknownst to me, do not understand the concept of family tradition and go on to the next grade without the required knowledge. My problem - my learners weren't all successful and I might not even realize it.

After Smartboard

With a Smartboard in my room, I have redesigned the lesson by creating a Smart Notebook file with several slides. The slides include a video clip demonstrating families engaged in different traditions, an interactive sorting chart of ways that families are alike and different, and a link to launch the lesson in our 1st grade software that lets students place pictures of families together. The short video engages all students as it is enlarged on the Smartboard and the audio plays loudly through the speaker. The sorting chart allows students to come up and physically move ideas as they defend their choices to the class, rather than waiting for me to write their ideas. The software program is touch-interactive and using it whole-class allows us to create discussion around the activity, rather than having students just mindlessly make choices to make it "through" the activity.

This is one example of transforming an activity to get students up and moving while participating in discussion and building their understanding of important ideas through methods that each student understands.

Would all of the work involved in planning this unit be worth it? Would students be more engaged? Would all students be more successful than if we used traditional teaching methods alone? These are the important questions to ask as we examine the effect use of Smartboards in classrooms. My belief is that they do make a difference for students and teachers. While many studies haven't concluded that test scores and reading levels increase, there is a lot of anecdotal evidence that teachers using Smartboards are seeing more learners engaged and observing students positive interactions.

For a school to integrate Smartboards in classrooms, there are several requirements. First, they must make intentional decisions about where to place them and how they will be used. Teachers should be involved in the decisions. When my school began to

think about how to adapt our teaching to the learners in our building, we chose Smartboards as one technology to help us achieve our teaching and learning goals. It has to come from the teaching rather than from the fun of the technology. The reality is that it is fun to use a Smartboard, but my choice to include it in lessons is always about making learning happen while having fun along the way. Fun is not the goal, but a happy side effect!

Second, a school should support the teachers with initial and follow-up training. They will need someone who can come “look at this” when it isn’t working. There is a learning curve when a teacher first begins to use a Smartboard. He or she needs to learn how to use the board, how to locate resources to use, and even how to create his or her own resources using Smart Notebook (or an alternate program). If the goal is to help our teaching by using the technology, we can’t afford for the technology to fail the teacher!

In addition, a school should create a place to store and share files. If I create an interactive math lesson and 5 other teachers could use the same one, we need a common place to store and access them. If a school keeps these recommendations in mind, it is likely to have a successful implementation of this interactive technology that benefits both teachers and students.

Benefits of this Solution

The Smartboard is one brand of interactive whiteboard. It comes packaged with Smart Notebook, which is software that allows teachers to create interactive lessons. Educators can also use the toolkit, which includes a gallery of 1000s of items to include in lessons. I am amazed at the way that I am able to maintain engagement in discussions with my students using my Smartboard. They can watch a demonstration, practice and apply it right away, and cooperate together or problem solve as they learn. All activities I have students engage in are directly related to curriculum. In fact, my planning has become even more carefully directed as I decide how best to implement my Smartboard in a particular lesson when I choose to.

Measuring the impact of using Smartboards in classrooms has stimulated a lot of debate. They can be an expensive technology to implement and people want to see results. They want to see higher test scores and scoff at anecdotal stories from teachers, but I have anecdotal stories of my own. Last year was my 2nd year with access to a Smartboard, but it was the first time I had permission to keep it in my room for instant, anytime access. My autistic student loved it best of all and while he often couldn’t sit for a story or a class discussion, he would always sit for a

Benefits

- Smartboards can be used in every subject area.
- Students move and interact physically with the material.
- Multimedia can be used in lessons.
- Engaging all students.
- Lessons can be saved and shared among teachers

Smartboard lesson, listening and volunteering to come interact on the board. Being in awe of the board was enough to keep him engaged along with every other student, and he learned the content along the way!

Teaching students how to count combinations of coins is the single most difficult skill in my grade level. The year before I had my Smartboard, less than 70% of our first grade students met the goal by the end of the year. Last year, after we set a goal of getting over 80% to count coins, I created several interactive games and money counting activities for the Smartboard. Using these in whole group activities and also in small groups during Math centers helped me get over 90% in my classroom to the goal! While I believe some of the additional success was due to our increased focus on money counting, I also felt much better about teaching money counting this way because I knew every student was practicing and I was monitoring the practice to watch for unhelpful habits being created. To learn to count correctly, they need to practice correctly, and they need to practice a lot. That can be difficult to manage when giving students handfuls of change to count or trying to play a game like Money Bingo!

I know that other teachers can do the same types of activities successfully. I shared my Smartboard activities and lessons with my fellow grade level teachers, who borrowed the board for awhile and tried it out themselves. Even the least tech-savvy were able to navigate the activities and reported positive results to me when they returned the board!

Implications:

Our utopian goal is to reach all learners and create successful and literate citizens. Using an interactive whiteboard in a classroom CAN help us to achieve these goals, but we know that teachers make the most difference in creating the environment.

As with any technology innovation, we have to be careful to evaluate the progress and adjust for what we've noticed. I've learned that it is important to manage the "cool" factor. I can find endless "cool" activities that are just that - activities! I have learned to be more critical in choosing Smartboard lessons to share to make sure I am making best use of the technology when I am trying to reach all of my learners and meet all of their needs. Focusing on overarching questions and carefully planning discourse around our subject areas, as Brophy suggests, helps me to evaluate whether or not the Smartboard will be the best method in each case.

Any teacher is capable of integrating this technology if they choose to examine their pedagogy and take some time to become familiar with the technology. I have done a great deal of reflection since implementing a Smartboard in my classroom and helping other teachers in my building to do the same. This "smart" technology is a winner in my book!

**A. THEY
ARE ONLY
BOARDS.
TEACHERS
MAKE
LEARNING
HAPPEN!**

Source Material

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