



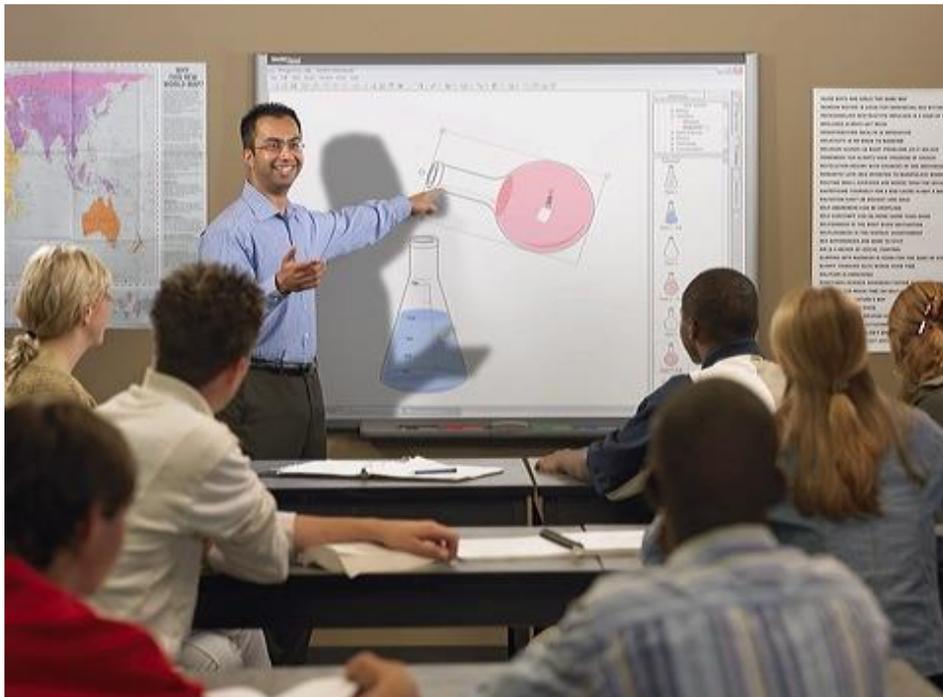
Is Your School Ready?

SMARTTM
Technologies

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Canada's population in 2020 at just under 40 million, meaning 81.3% of Canadians could own cell phones.

Executive Summary

Electronic devices in the hands of students are ubiquitous. Students have smartphones, tablets, laptops, and e-watches. The reality is in this digital world, classrooms too must be equipped to handle the paradigm shift from pen and paper to smart pens and smart boards, from books to ebooks. *Is your school ready to be up-to-date?*

Making Classrooms Interactive

Teaching has also evolved. It is also no longer the chalk and talk. With the emergence of online courses and hybrid learning (or blended learning: a combination of inclass and online), teachers too have to consider how to adapt their teaching to the various digital media, including videos, audio, and the internet. *Is your school ready for a more immersive class?*

Making Classrooms Relevant

The days of chalkboards, greenboards and white boards, static displays that are lifeless are over. How can we make the classroom more relevant to the students? To connect knowledge from online and expertise of the teachers to stimulate the students' learning? SmartBoards, developed by Smart Technologies, could be the solution that colleges are looking for. *Is your school ready to relate to the needs of today's students?*



Best Practices + Technology = Student Success

Great teachers get results. But when those teachers use innovative technology solutions designed specifically for education, **educators are 342% more likely to achieve outstanding success** when using teaching best practices and technology frequently.

Making Classrooms Eco-friendly

Imagine how much paper and toner (and time waiting for the person in front of you who decided on a Monday morning to print off 100 pages) your school will save by using the SmartBoard instead of handouts that students put in their binders and forget about anyway. *Is your school ready to be more eco-friendly?*



DID YOU KNOW?



Of the 1.3 million undergraduates polled, nearly all said that a moderate use of technology helped them succeed in college.



To produce one sheet of paper, it takes 3 gallons of water.

Problem

Resources are mostly online now, but without a bridge to connect these resources to the classrooms, teachers still must struggle to write notes on the board, taking valuable time in instruction time. Even with most classrooms equipped with a podium and projector, it still takes time to set up (computer booting up, projector bulb warming up, making sure the device is hooked up correctly, etc.).

Teachers who may have resources on their own computer also need to hook their own computers onto the podium, which may require a special adaptor. All that time is wasted in the classroom, while bemused students can just look on, rolling their eyes.

Today's students are tech-savvy¹, able to weave in and out of online resources, finding information that once took days to find now takes only seconds with Google.

Teachers who avoid technology altogether, or if they do not have the quick access of online resources with a rich source of various material, including videos, interactive activities, games, etc. will lose the attention of students, who all have devices of their own and able to quickly find out information. As a result, students become less motivated to come to class.

At the end of the school year, every teacher has faced this situation when they see their students binders full of paper, streams of paper, dog-eared, stained, folded, all to end up in the recycle bin. Paper costs trees and water, even recycled ones that can only reclaim a certain percentage. The rest end up in garbage dumps, the inks running off into the soil and eventually into our water supply.²

Solution

With the ubiquity of electronic devices and online information, it makes sense that there is a tool to bring all these resources to the classroom, one that seamlessly turns on at a touch of button and less clunky than the old-fashioned PC at the podium (good luck being able to connect, Apple or smart phone users!). With a Smartboard, an all-in-one-device, teachers have ready access to online resources and teacher files to be shared. In fact, teachers can attach their computers, video cameras, digital cameras, microscopes, etc. No more fumbling with connections and trying to find a stable Wifi signal. Need to clear the board? Just push a button.

¹ <https://www.insidehighered.com/views/2008/03/20/learning-teach-tech-savvy-students>

² <https://www.theatlantic.com/technology/archive/2012/06/it-takes-more-than-3-gallons-of-water-to-make-a-single-sheet-of-paper/258838/>



For those bored students, who prefer to browse their smartphones than look up and pay attention to the teacher, we would need a large enough smartphone for the whole class to see. As yet, Apple nor Samsung, has any such device that big, but Smart Technologies has a

solution: Build an electronic board with similar functionalities comparable to a really large smartphone attached on the wall.

Now, students of all learning styles can enjoy the class:

TYPES OF LEARNERS

According to Tech News, the breakdown of learning styles varies, but a typical classroom contains **30 percent** visual learners, **25 percent** auditory learners and **15 percent** kinesthetic learners, with the remaining **30 percent** consisting of students with mixed learning styles.

- **Visual Learners:** Smartboards will wow the visual learners with eye-popping images, charts, videos, maps, graphs, games and more.
- **Tactile/Kinesthetic Learners:** They can have fun by touching the board to draw, write, manipulate the DNA strand, move in and out of atomic structures, rotate around the Sun and more.
- **Audio Learners:** They can listen and have discussions. For the teacher, no more hassle of cueing up to the proper place on cassette tapes or skipping of tracks on CDs.

Unlike some touchscreens, Smartboards can accommodate several users at the same time. While Timmy is writing out his times tables, Sally can be solving derivatives using first principle at the same time. Studies have shown that student engagement significantly increases upon the introduction of SmartBoards in the classroom. Learning suddenly came to life.

Paper manufacturers may be out of a job, but without those endless reams and reams of photocopies for 30+ students times five days a week, think of all the paper that could be saved. That adds up to tons and tons of paper that are dumped each year.



Benefits

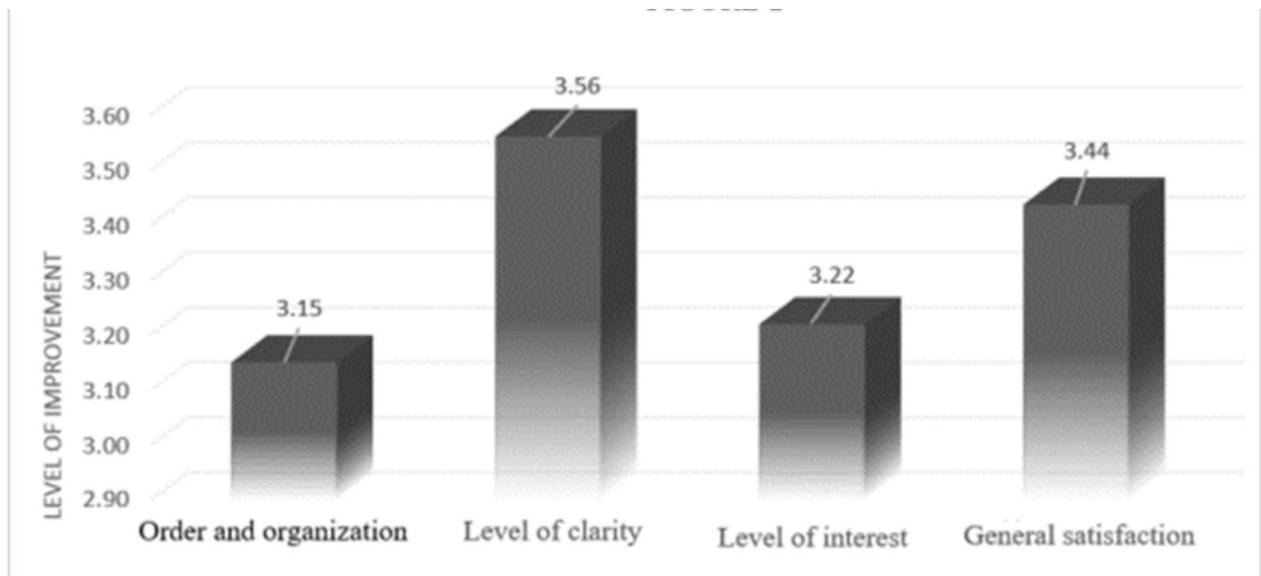
Research has shown that Smartboards plays a significant role in enhancing learning that takes place in the classroom. With a master teacher, the possibilities are endless.

The introduction of the Smartboard has:³

- raised test scores
- improved student learning
- enhanced literacy,
- boosted attentiveness
- increased comprehension
- increased peer collaboration⁴



Some of the findings are outlined in the chart below, published by *Higher Education Studies*. We see that students have improved in many aspects of learning, including order and organization, clarity, interest, and satisfaction.



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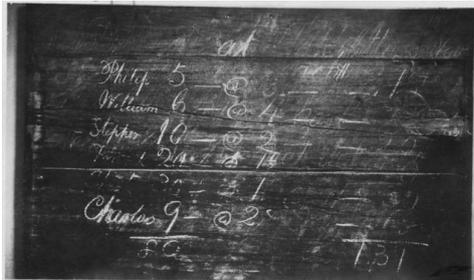
³ <http://www.teachhub.com/technology-classroom-benefits-smart-boards>

⁴ https://fisherpub.sjfc.edu/cgi/viewcontent.cgi?article=1234&context=education_ETD_masters

⁵ <https://files.eric.ed.gov/fulltext/EJ1135741.pdf>

History

In the 1800s, slate and wood were plentiful and cheap. Unfortunately, they were also inefficient because teachers had no way to present a lesson or a problem to the whole class; instead they had to go to each individual student and write a problem or assignment on each one's slate.



1801



For one geography teacher in Scotland named Mr. James Pillans, he grew tired of arduously going to every student and drawing maps over and over again. So he put several slates together and hung it to the wall and voila, the first modern blackboard!

For about the next 160 years, the chalkboard became a staple equipment in classrooms all over the world. The next evolution happened in the 1960s when the black chalkboard became green. Well, it was more than just the colour. The green made it easier to read, less chalk dust and lighter to handle.

1960



Then, the Dry-Mark company introduced whiteboards for use in schools. The problem with early whiteboards was that they were hard to clean, and information often left a slight mark on the surface even once it was wiped away. And the smell of the markers also was a big turn off for many teachers.



Smart Technologies made the first interactive whiteboard to provide touch controls. The system included an interactive whiteboard, projector and whiteboard software that accepted touch input from a "smart" pen. It would be the start of the Interactive whiteboard boom!

1991



Technical Overview

A **SmartBoard** is an electronic display that connects to a computer and the Internet. It also has a touch screen which allows users to directly interact with it with an electronic pen. Like a large flat-screen television, it is usually attached to the wall and big enough to be seen by a group of people, usually in a classroom or meeting room. SMART Board®, a registered trademark of SMART Technologies, one of the earliest innovators of interactive whiteboards, established in 1991.

The latest interactive whiteboard (SMART Board® 7000 as shown) has the following components:

1. **Screen:** A touch screen available in various dimensions, depending on the model.
2. **Presence Sensors:** Energy-saving feature that will turn on when it detects people in a room; otherwise, it will go on standby mode
3. **Home Button:** To open to the homepage
4. **Eraser:** To erase a large area on the board
5. **Pens:** To write and erase; colours can be changed on the screen
6. **iQ Appliance:** Specific to some models to allow full Windows 10 functionality without the need for an external computer
7. **Connector Panel:** To connect to other devices using HDMI, USB, etc, connections

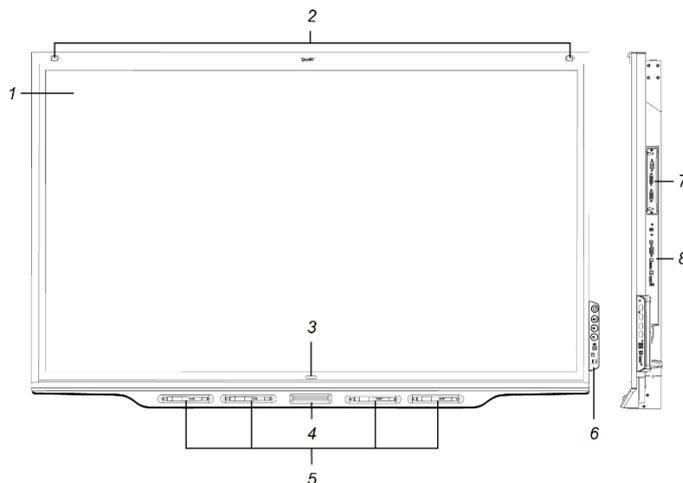


Image Source SMART Board, Model 7000: <https://support.smarttech.com/docs/hardware/displays/smart-board-7000/en/about/components.cshml>

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