SMART Research

A large and growing body of research is available to support the effective use of SMART products. SMART provides product loans and other support for qualified researchers who undertake research projects on a variety of topics. SMART also develops white papers that address specific issues and competitive claims. These research findings and white papers can be valuable tools when communicating with results-oriented customers and prospects about the impact and benefits of SMART products.

Completed research projects

University of New Brunswick Health and Education Research Group (2008)
Applying SMART Board Technology in Elementary School Classrooms: Investigation of a School-Wide Initiative
A year-long study by researchers at the University of New Brunswick shows that combining relevant professional development with the use of SMART Board™ interactive whiteboards improves the education experience for both teachers and students during a school-wide SMART product implementation.
www.smarttech.com/researchUNB

Keywords: SMART Board interactive whiteboard; SMART Notebook; implementation; professional development; elementary; government; teacher knowledge; teacher confidence; classroom instructional practices; pedagogical benefits; differentiation of instruction; collaboration

British Educational Communications and Technology Agency (Becta) (2007)
Evaluation of the Primary Schools Whiteboard Expansion Project
A report commissioned by Becta and written by the Education and Social Research Institute at Manchester Metropolitan University, a highly ranked research facility, proves that increasing students' exposure to interactive whiteboards through curriculum integration has a significant and positive impact on student achievement, especially in mathematics and science.
www.smarttech.com/researchBecta

Keywords: SMART Board interactive whiteboard; government; student achievement; implementation; learning outcomes; teacher preparation; mathematics; science

"Focus group, survey and observational data revealed that students were generally more engaged in learning activities when SMART Board technologies were incorporated into instructional activities."

University of New Brunswick Health and Education Research Group (2008)

"The interactive whiteboard has been welcomed enthusiastically by a large number of primary teachers and its take-up in schools has proceeded with unprecedented rapidity. This appears to be because it is a resource which is immediately useful to teachers in conducting whole-class teaching, which is a requirement of the primary strategies."

British Educational Communications and Technology Agency (Becta) (2007)

MOREnet and Missouri Department of Elementary and Secondary Education (2004)

Analysis of 2004 MAP Results for eMINTS Students

The Missouri Research and Education Network (MOREnet) and the Missouri Department of Elementary and Secondary Education included SMART Board interactive whiteboards in the technology package that schools in the eMINTS program received. Annual reports analyzing the impact of the program on student learning and achievement are available for 2001 to 2004.

www.smarttech.com/researcheMints

Keywords: SMART Board interactive whiteboard; government; annual year progress assessments; professional development; instructional practice; Enhancing Education Through Technology (E2T2) grants; Title I and II; special education; achievement gaps; student achievement; visible minority students; communication arts; math

White paper series

SMART develops white papers on a variety of topics to help customers make informed decisions about which products best suit their needs. The following white papers are currently available:

- Creating Classrooms for Everyone: How Interactive Whiteboards Support Universal Design for Learning
- Why Classroom Amplification Systems Help Teachers Teach and Students Learn
- Interactive Whiteboards in 1:1 Learning Environments
- Evaluating Total Cost of Ownership for SMART Board Interactive Whiteboards
- Interactive Whiteboards and Learning: Improving student learning outcomes and streamlining lesson planning
- The Truth About Interactive Whiteboards, Pens and Fingers: Separating myths from facts
- The Truth About Interactive Whiteboards and Active Screen Area: The way you measure matters
- The Truth About Wireless Slates in Differentiated Classrooms: Using wireless slates with or without interactive whiteboards
- The Truth About Interactive Whiteboard Operating Specifications: Interpreting temperature and relative humidity
- The Truth About Interactive Whiteboard Durability: What durability means and why it's important
- The Truth About Interactive Whiteboard Resolution: Why higher resolution does not always mean greater accuracy

www.smarttech.com/whitepapers

Keywords: SMART Board interactive whiteboard; 1:1 learning environment; cost; pen versus finger; active screen area; wireless slate; operating specifications; durability; interactive whiteboard resolution; universal design for learning; special needs; classroom amplification system

SMARTer Kids Research library

The research projects included in the SMARTer Kids™ Research library cover a diverse range of subjects, such as specific learning needs and styles, professional development issues, educational software and classroom dynamics. The projects are teacher-led and focus on how students learn and interact in K–12 and higher education classrooms. Projects in the library are listed alphabetically and by subject.
www.smarterkids.org/research/library.asp

Keywords: SMART Board interactive whiteboard; Senteo™ interactive response system; classroom based; teacher-led; computer games; higher education; history; K–12; language arts; math; music; note taking; problem solving; science; special education; teacher training

Forthcoming research projects

University of Victoria (2009–2011)
Integrating Technologies for Teaching and Learning
This project will examine how SMART products are adopted and integrated for teaching and learning. Specific research designs, procedures and instrumentation will emerge through the researcher's collaborations with participating in-service and pre-service teachers. Researchers will explore several themes, including the effectiveness of SMART products and student-centered learning in distance learning environments, and how SMART products can be used to support and scaffold self-regulated learning. The project will also look at issues and best practices to consider when incorporating SMART products across a variety of instructional contexts, including small classrooms, large lecture halls, fixed computer lab environments and mobile laptop computer lab environments. An interim report will be available in January 2010, and the final report will be released in June 2011.

Keywords: SMART Board interactive whiteboard; Senteo interactive response system; SMART Document Camera; SMART Notebook SE; SMART Sync; Bridgit™ conferencing software; distance learning; student-centered learning; learning environments; collaboration; pre-service teachers; in-service teachers

University of Virginia Center for Technology and Teacher Education (2008–2009)
Using Technology to Enhance Student Teachers' Lesson Planning and Classroom Quality of Life
Researchers at the University of Virginia conclude that SMART Board interactive whiteboards, when used with appropriate pedagogy and digital resources, can improve student learning outcomes and teachers' quality of life. The study and forthcoming report focus on how to best prepare math and science teachers to use interactive whiteboards to promote understanding.
www.smarttech.com/researchUV

Keywords: SMART Board interactive whiteboard; SMART Notebook; pedagogy; digital resources; learning outcomes; teacher quality of life; math; science; pre-service teachers; instructional practice; professional development

Toronto District School Board – Sympodium interactive pen display project (2008–2009)
Improving Literacy Skills of At-Risk Students in a 1:1 Learning Environment
This project explores how the Sympodium™ interactive pen display and SMART Notebook software have an impact on the literacy skills and achievement of at-risk students. The research is being conducted in a 1:1 instructional setting and focuses specifically on how the Sympodium interactive pen display can enable both student and teacher, as they sit side by side, to engage in assisted, shared literacy activities. The final report will be available in June 2009.

Keywords: Sympodium interactive pen display; SMART Notebook; SMART Ideas™ concept-mapping software; 1:1; literacy; student achievement; at-risk students

Toronto District School Board – SMART Board interactive whiteboard project (2007–2009)
The Value of Interactive Whiteboard Technology in Supporting Teacher Practice and Student Mathematics Achievement
This project has been tracking student achievement in math at 11 inner-city elementary schools in the Toronto District School Board. These schools, which all use SMART Board interactive whiteboards and SMART Notebook software in daily instruction, have shown a substantial increase in math achievement, as measured by Educational Quality Assessment of Ontario scores at the third and sixth grade. The learning community this study aims to create will help teachers develop the expertise to use interactive whiteboards to support and enrich the teaching of the elementary mathematics curriculum. The final report will be available in June 2009.

Keywords: SMART Board interactive whiteboard; SMART Notebook; mathematics; geometry; algebra; student achievement; standardized testing; learning outcomes; curriculum; instruction; distance learning; collaboration; student use of SMART Notebook