

HOW THE RIGHT TECHNOLOGY CAN MOTIVATE STUDENTS

Keep Students Engaged and Help Them Thrive

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Introduction

Faced with many new challenges in the past few years, educators responded by creatively introducing new teaching methods, technologies, and strategies designed to help students find success in hybrid or remote environments. Today, with most learners back in the classroom or embracing more permanent models, educators are determining how best to utilize technology to foster student success in the classroom—and to solve some of the lingering challenges from the pandemic. Research from McKinsey notes that on average, the pandemic left students globally being about eight months behind in their educations. As a result, educators are exploring technologies that can help students learn, restore their confidence, and find their love of learning.

Some of the biggest questions educators, administrators, and parents face are: How do we really get students invested in learning? What will it take to ignite their passion, help them explore their unique abilities and skills, and create the foundation for a lifelong habit of learning?

Let's take a closer look at how emerging technologies can help to motivate students to learn—and how educators can make the most out of these technologies in different classroom settings.



Creating the Classroom Setting for Motivation

When imagining the classroom that motivates students and drives the best educational outcomes, it's important to start in a place that many may not expect: classroom furniture. This is where the 21st century classroom starts. If you feel a sense of dread when remembering a chalkboard and fixed desks facing the front of the room, you're not alone.

A variety of emerging trends are helping educators reimagine classrooms for a digital-first, collaborative, student-centered learning experience. Industry Dive reports that post-pandemic classroom makeovers have included stronger Wi-Fi, larger displays and screens, and flexible furniture. American School and University Magazine notes that a recent study shows that outfitting classrooms with flexible furniture results in students having more positive feelings about their learning and classroom experience. Some trends that are taking hold and can help students stay moving and engaged throughout the day include:

- Flexible, movable furniture that can be configured in a variety of ways. Clusters can be used for collaborative activities or moved into rows for lecture and discussion.
- Alternatives to desks and chairs that help alleviate the pressure of sitting all day. Quartz reports that standing desks help students focus, reduce disruptive behavior, drive better health outcomes, and even improve posture.
- Active workstations that adapt to the right level of play and exploration for the student and subject can also help increase engagement and immersion in the activities at hand.





Connected Devices Personalize Digital Learning

According to EducationWeek, 90% of teachers report that students have access to their own device. Often called a one-to-one model, a higher ratio of technology helps give students access to learning resources even when working on their own. This can have a significant impact on performance and attention in the classroom, during active assignments, and outside the classroom when completing homework.

With the increase in digital classrooms and personal learning management solutions available for K-12 classrooms, many students now utilize software that can customize their learning journey to their needs. For example, AI-powered algorithms can tailor assessment recommendations to a student's own learning progression, provide additional resources to fill in gaps, and notify a teacher if a student potentially requires intervention. Edutopia reports that when students feel in control of their learning journey, they're more likely to be engaged and motivated in the classroom.

Laptops and tablets also allow students to take notes during class, and they support learning in the day-to-day classroom environment in other ways as well. Many collaboration and digital classroom solutions offer options that users can follow along with on their own devices during lectures, making it easier to sustain both focus and excitement about the material being presented. Connected devices give educators the ability to deliver personalized learning at scale, while also helping students develop the technology skills they need to master for jobs of the future.

The digital divide is an important topic that was cast into the spotlight during COVID. Not every student has access to the same level of technology, internet access, and support needed when they're outside the classroom. Providing students with devices that have connectivity can help close that divide. Connected devices can also help schools connect students to browser-based solutions for coding, design, or productivity suites without needing to be on campus or have access to specific expensive equipment.

Learning Management Systems Enable “Flipped Classrooms” and Innovative Teaching

Connected devices don't just give students a tool to learn; they allow educators to introduce new pedagogy with an eye on student engagement. A literature review completed by Australian Christian College found that a “flipped classroom” could increase student engagement. The flipped classroom refers to using homework time to get students to listen to podcasts, watch videos, and view other content formats that research shows are more engaging. By using digital platforms such as Google Classroom, it's easy to share and monitor which assets students have successfully watched. Then, in the classroom, teachers can lead learners through reflection and discussion for deeper conversations.

This is just one example of how educators can leverage technology to increase student engagement. For example, instead of reading a textbook with a dry description of the Egyptian pyramids, students can consume the text as part of a teacher-customized

VR or video-based guided tour of the pyramids. In inquiry-based or project-learning systems, students are tasked to learn more about a subject and then present their findings or write about them. QR codes can be used to take students directly to homework, resources, or through a scavenger hunt. When students have access to connected devices, a strong internet signal, and a learning platform or digital classroom, educators' ability to engage students in the curriculum is limited only by their imaginations.

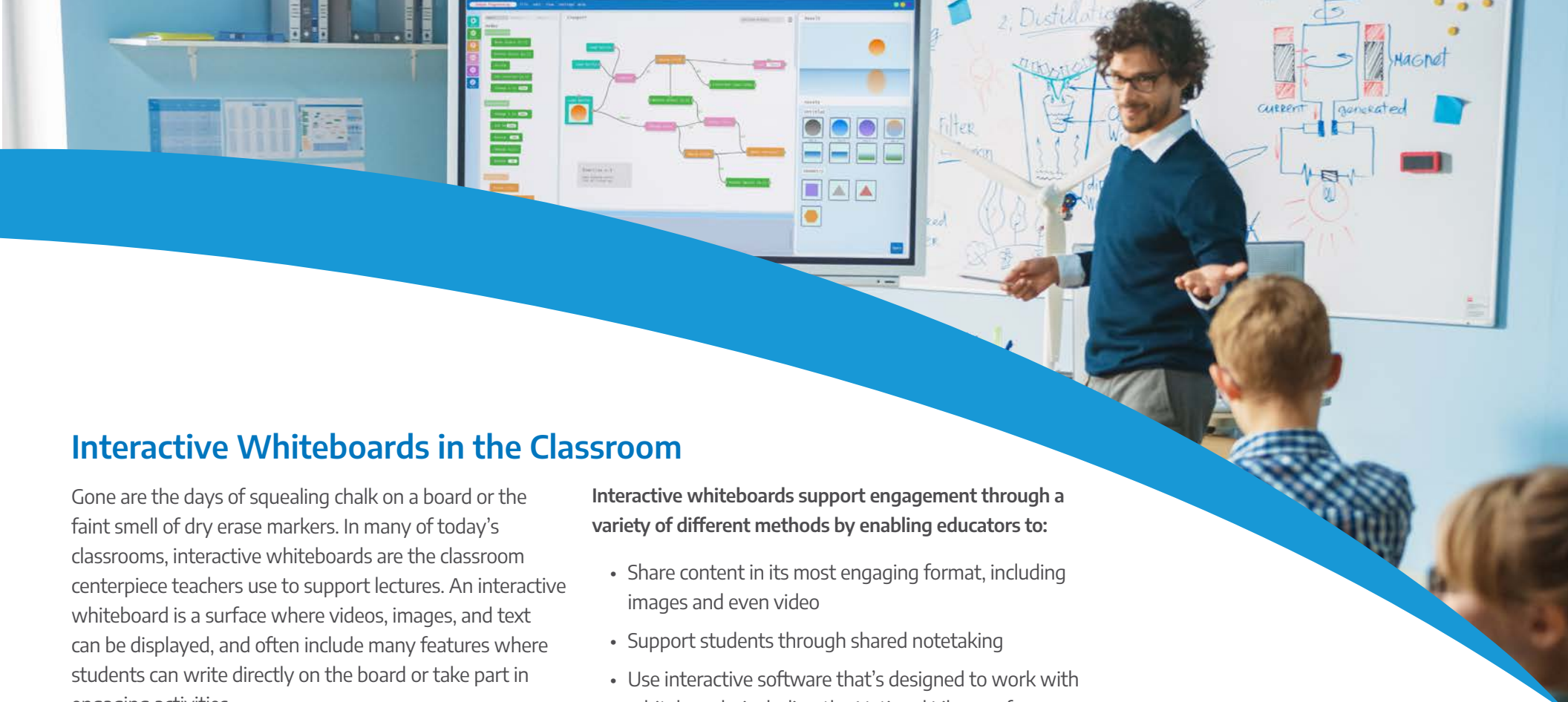


Gamified Learning Management

According to one detailed review of educational literature, digital games and gamification have a significant impact on student engagement and motivation. Gamification refers to using game-like features to help students in learning. This can manifest in a variety of forms, from actual games that teach the concepts to gamified assessments. Teachers can use rewards such as collecting badges or prizes to get students excited about progressing along their learning path.

Tools like Kahoot integrate with Google Classroom and can present assessments and reviews as polls, sliders, images as answers, and much more. By exploring how gamified learning can fit into the testing process—or any section of the day-to-day learning pathways students take—it's possible to infuse excitement and break up the feeling of monotony that can sometimes take hold.





Interactive Whiteboards in the Classroom

Gone are the days of squealing chalk on a board or the faint smell of dry erase markers. In many of today's classrooms, interactive whiteboards are the classroom centerpiece teachers use to support lectures. An interactive whiteboard is a surface where videos, images, and text can be displayed, and often include many features where students can write directly on the board or take part in engaging activities.

A wide variety of studies, including research conducted by St. Johns Fisher University, have found that students participating in courses on interactive whiteboards show "improvement of both student motivation and achievement."

Interactive whiteboards support engagement through a variety of different methods by enabling educators to:

- Share content in its most engaging format, including images and even video
- Support students through shared notetaking
- Use interactive software that's designed to work with whiteboards, including the National Library of Virtual Manipulatives
- Leverage the provider's built-in sharing community and lesson plans
- Center a group or class project that involves students taking part at the whiteboard and leveraging its collaborative features
- Record presentations or great ideas with screen capture technology
- Expand the use of multi-media and multi-modal curriculums that can shift seamlessly throughout the course of a lesson

Virtual Reality and Augmented Reality

Virtual reality and augmented reality are finding their way into the classroom and creating another avenue to engage student interest. Virtual reality is being used to train students on new skills, allow them to practice skills that might be difficult in their physical environment, and explore ancient sites and other new realities. Schools are running virtual reality programs through smartphones, tablets, and computers, as well as investing in dedicated headsets.

Educators are finding innovative ways to use this technology to help students grow and learn, including:

- Taking students on virtual field trips that would be logistically or financially out of reach
- Creating specialized experiences with students who have disabilities in mind, whether it's to tour a space or practice specific life skills
- Utilizing cross-language features that allow students to engage in content in the language of their choice
- Gamifying learning, especially for times when students aren't physically in the same space, so they can engage and play



Innovative Tech and the Maker Space

The “maker” trend has been impacting education for a decade or more, and the lower costs of technologies and the ability to integrate them more widely in the classroom are transforming how students approach these experiences. Robots, drones, and virtual reality are just three example areas that can be used to give students hands-on experience. Constructing and flying a drone, for example, can support math and science. VR experience suites can help students with language, storytelling, design, and communication. In addition to introducing and reinforcing these crucial skills, hands-on experiences also provide access to and experience with industry-related tools that can tie into practical experience for the job market and beyond.





Educator Training to Inspire

While technology introduces a wide range of emergent possibilities to the classroom, educators often need help, training, and resources to make the most of these devices. If teachers are not empowered to use them, educational technologies are underutilized, at best—and at worst, they’re not incorporated into the curriculum. To make the most of their investments in educational technology and help educators harness the potential to motivate students, school districts need to:

- Ensure that each educator knows what they have access to and an overview of the devices’ features
- Provide hands-on training with the tools so educators can test them and ask questions
- Offer ongoing support for troubleshooting, answering questions, or brainstorming how to include specific technologies into the lesson plan
- Showcase examples of how technologies are used in classrooms
- Highlight the research and statistics on how emerging technologies help students and affect classroom and learning outcomes
- Connect educators with software, lesson plans, and other resources that make the process of using new technologies easier, without adding more work to their existing and considerable workloads
- Highlight how technology features can assist educators in cutting down their workloads, such as by creating a central resources database students can visit or automatically scoring multiple choice exams

Underlying Infrastructure Impact

One of the most important areas school districts are paying attention to—to both power a 21st century classroom and deliver an engaging student experience anywhere—is improving their underlying infrastructure. Computing power, network connectivity, and security measures are needed to safely power a variety of solutions. Some of the critical aspects schools need to consider include:

Cybersecurity

Introducing a variety of new technologies and endpoints creates greater risks for hackers or other cybercrimes to take root. Having clear cybersecurity standards, management tools, and the right software in place to support security at both the network and device levels is vital. It's also important to think about offering training and support to staff, IT, and even students. In a SolarWinds study, 53% of IT educational leaders identified untrained staff or insiders as a risk to their security.

Compute Power

Whether you rely on on-site machines or store applications and data in the cloud, your access to data and compute power is critical. When users try to run virtual reality experiences from a local computer, for example, the graphically dense and sophisticated programs require tremendous computing power to run smoothly. As increasingly advanced applications become a fixture in the everyday learning environment, endpoints and the servers they connect to must be robust enough to deliver the real-time experiences these learning solutions demand in order to be effective and engaging.

Network

The speed and security of a school's network act as the nerve center that powers digital classrooms and more engaging experiences. When you're working with technology to motivate and excite students, a strong internet connection is vital. In today's fast-paced world, students are used to consuming content at lightning speed. Educational experiences that can keep pace hold their attention—and network security and speed is crucial to rolling out many of the technologies we've discussed.



Next Steps

Today's students may face challenges when it comes to motivation and engagement. However, educators have a wider range of pedagogical and technological solutions that can help. Whether it's introducing personalized education through digital platforms or exploring how tools like interactive whiteboards can reenergize in-person learning, schools can act on a variety of fronts to help students find new levels of focus and thrive.

However, you don't have to navigate this alone. Contact Connection today to arrange a conversation with a classroom technology expert who can provide recommendations tailored to your students, goals, budget, and more.





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