

The Adaptable Classroom – Hybrid Learning with Wacom



Macom[®]



AT A GLANCE

Industry

Education

Usage Scenario

Hybrid and fully remote learning

Challenges

Creating a functional, digital classroom during COVID; finding an effective method for student/teacher feedback virtually

Solution

90 Intuos tablets for the BELA Freshman class

Benefits

- Kinesthetic processing using movement, such as hand writing, to process information
- · Increase in class engagement and digital literacy
- Affordability students are not replacing school supplies





"Wacom tablets are an essential part of any classroom or makerspace."

Celina Bertoncini. 9th Grade STEAM teacher at BELA

Challenge

Learning together, wherever

Sisterhood, scholarship, strength and service. These are the four pillars of the Brooklyn Emerging Leaders Academy (BELA), an all-girls public charter school located in the Bedford-Stuyvesant neighborhood in New York City. With a mission to empower each young woman to be the best version of herself, BELA provides a rigorous college preparatory curriculum, service-learning initiatives, and a commitment to cultivating a spirit of ownership within each young woman.

Celina Bertoncini is a 9th grade STEAM teacher at BELA, whose classes are currently a mix of remote and traditional learning. With a background in film and animation, Celina is no stranger to Wacom. Tasked with creating and teaching a brand-new STEAM program at the height of COVID, she knew Wacom would make hybrid and fully remote learning much more accessible.

She needed to figure out a virtual alternative to so many of the important ways she interacted with students in the classroom, such as helping students at their desks while they worked and providing meaningful feedback throughout their process. When the opportunity for new EdTech became available, Celina advocated for Wacom Intuos tablets for each student in the freshman class. "That whole system of student/ teacher feedback is very challenging virtually – by incorporating these tablets and applications like Pear Deck into our STEAM classes, I can see students drawing, taking notes or writing down answers in real-time. It makes that process much easier rather than lecturing at students. Teaching is not a one-way street; it's a feedback loop between student and teacher."

Solution

An all-in-one, multi-subject canvas

Before BELA acquired 90 Intuos tablets for their freshman class, each student worked on a laptop provided by the academy. By only having laptops, the students were losing the learning benefits of handwritten notes. Celina knew the students could handwrite their notes, give feedback or solve math problems using Wacom tablets. "The Intuos tablets give students a form of drawing which, in turn, gives them a form of absorbing information virtually." The addition of a digital pen versus a trackpad offers a more comfortable writing and drawing experience, as well. "The way you hold your hand with a stylus is better for your wrist physically."

In a study published in Psychological Science, Pam A. Mueller of Princeton University and Daniel M. Oppenheimer of the University of California, Los Angeles found that students who were handwriting notes were more attentive to key points, thus retaining more information.* Celina explains, "Kinesthetic learning with a tablet is essential for the students. It helps them focus and process information in another way."

Investing in smart technology

BELA is a new school with limited resources. They are also conscious of their impact on the environment and their community. The technology investment had to be cost effective, reliable and sturdy. "From an environmental standpoint, the tablets save students the burden of carrying multiple notebooks and writing tools that eventually have to be replaced throughout the school year. In turn, having a digital tablet and pen saves the students money when it comes to supplies. By having a digital tablet, you can make hundreds of notes and drawings without burning through materials.

"By having virtual notebooks, students are able to take notes and save their work digitally which teaches them how to be digitally literate at a young age."



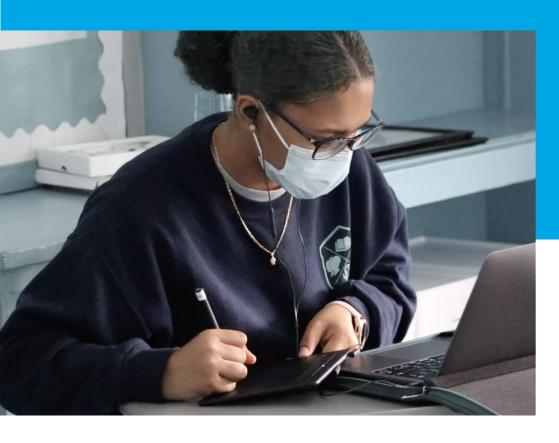
In terms of affordability, we're a newer school and limited in resources in general, so we have to be particular about where we're putting our money. The tablets are durable and long-lasting which was an important factor in the decision to implement the Wacom tablets."

The benefits of virtual notebooks

In an era in which tech skills are fundamental in higher education and professional environments, Wacom tablets teach students to be digitally competent at an early age. They serve as an introduction to paperless workflows and prepare students for their careers. "By having virtual notebooks, students are able to take notes and save their work digitally which teaches them how to be digitally literate at a young age, a skill that is crucial for students to have regardless of COVID. It's a skill they'll take with them to college and beyond."

^{*} https://www.npr.org/2016/04/17/474525392/attention-students-put-your-laptops-away

"A lot of my students have not had access to a computer, so introducing them to tools like the tablets became imperative."



Implementation

Problem-solving with a pen

For Celina and her STEAM students, learning how to use the Intuos tablets blended right into her computer science lessons. With a little practice, the students were thrilled to learn a new technology and apply it to all subjects. "This generation is tech-dependent, but they're not tech-savvy. A lot of them don't have access to computers so they become dependent on their phones, especially for consuming media. A lot of my students have not had access to a computer, so introducing them to tools like the tablets became imperative. As teachers, we make sure those gaps are filled and that the students don't have any disadvantages."

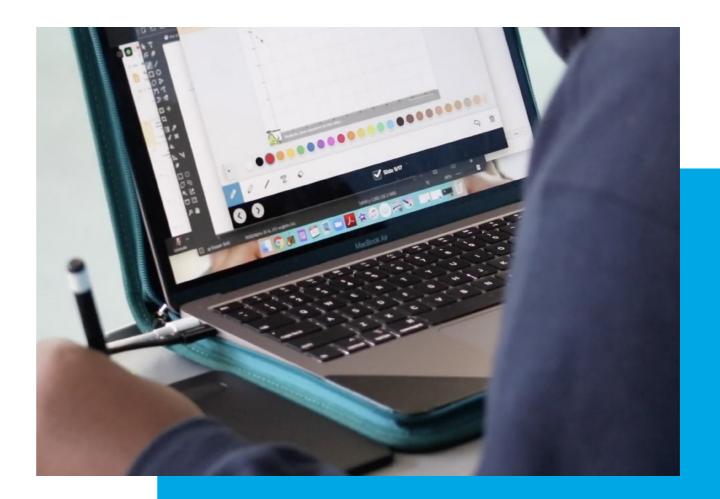
Celina believes every child has an inherent desire to learn and be creative. With a little practice, she felt confident that each student would master the pen tablets for use in all STEAM courses. "Despite some challenges at first, I knew my students would adapt to the tablets, and guess what – they're using them now! It was simply a process of learning for them. The students were very excited about getting acclimated to the new tablets and were even more excited when they got it to work. That process of problem-solving made the tablets even more rewarding and seeing them in action motivated the students in their learning."

Outcome

Dream STEAM

Since implementing the Intuos tablets, Celina noticed an increase in overall class engagement. In tandem with online learning applications, the students are able to give answers and responses in real-time. For class games, the tablets create a canvas for drawing which sparks even more participation. The ability to give feedback on-screen using the tablets and built-in annotation tools is another success within the classroom. "Because we can draw and annotate on each other's work, the feedback loop is more productive, which makes class-time more efficient. In digital, we have the power of undoing, deleting, moving something, etc. That tactile nature of being able to move pieces and rearrange them is a really powerful element that does not exist without the digital tablets."

Celina leads a "Go Grow" or extracurricular club called "Digital Drawing" where students use the tablets in combination with Krita (a digital painting and 2D drawing application) to practice their artistic skills. "The students are so excited to show me what they've made and they're very proud. Overall, I've seen more enthusiasm to learn and join these clubs." In the future, she hopes to build a "Dream STEAM Room," a makerspace for students to use their tablets to create and collaborate digitally. "In the year 2021 and beyond, digital literacy is the new type of literacy. In a technology age, schools and teachers need to start thinking about Wacom being a huge part of the digital revolution."



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