

## RESEARCH BRIEF

# The Use of Instructional Technology in Our Classrooms

## Our Philosophy



Quite simply,  
technology is  
not pedagogy;  
rather,  
technology is a  
tool to support  
and enhance  
pedagogy.

The Mariemont City School District recognizes that the classroom teacher has the most powerful influence on learning.<sup>1</sup> Therefore, emphasis on strong pedagogy is paramount as evidenced through the district's *Characteristics of the Highly Effective Teacher* – eight research-based characteristics proven to yield high effect sizes for student learning and engagement.<sup>2</sup> These high yield instructional strategies are best practice with or without technology. Quite simply, technology is not pedagogy; rather, technology is a tool to support and enhance pedagogy.

For this reason, the Mariemont City School District's use of instructional technology in classrooms *first* aligns to and supports the student achievement goal and objectives defined in the District Action Plan.<sup>3</sup> *Then*, instructional technology is deployed through the lens of four core beliefs:

- (1) ***Technology is a tool for instruction.*** It is used to transform and enhance learning in the classroom by the teacher, not used as a replacement.
- (2) ***Professional development for teachers is critical.*** Teachers need support and training to understand when the use of technology in the classroom is appropriate and how it can effectively be used to advance learning goals.
- (3) ***Growing up digital is reality.*** Students need support and training to make sense of today's digital world in four critical areas: (1) digital literacy; (2) digital safety; (3) digital balance; and (4) digital identity.
- (4) ***It's more than just screens.*** Technology is becoming increasingly ubiquitous and encompasses much more than a computer or tablet in the classroom. Many different types of technology tools can be used to enhance the educational experience for students.

## Findings & Evidence



**Passive screen time for entertainment purposes is different from active screen time for tasks like completing online homework and assessments, creating presentations and collaborating with others on a project.**

Today's students are surrounded by technology and are accustomed to using smartphones and tablets for entertainment and to socialize. Screen time for these purposes in excess comes with risks to adolescents, and although the American Academy of Pediatrics does not recommend any set screen time limits for children ages six and older, it does emphasize the importance of monitoring their use to prevent adverse effects.<sup>4</sup> This *passive* screen time for entertainment purposes is different from *active* screen time for tasks like completing online homework and assessments, creating presentations and collaborating with others on a project. The American Academy of Pediatrics does not count these types of uses as screen time.<sup>5</sup>

It is widely recognized that instructional technology used as a tool to enhance high yield pedagogy has the power to reach more students by accommodating different learning styles, accelerating learning by delivering personalized instruction, increasing the amount of data and feedback available to learners and teachers about progress and allowing students to access diverse learning materials both in and out of school.<sup>6</sup> Furthermore, dozens of rigorous studies of educational technology indicated that, when instructional technology is used to individualize students' pace of learning, the results show enormous promise.<sup>7</sup>

The influence of technology on student achievement has been monitored and analyzed in a variety of studies – most notably by researcher and professor John Hattie whose latest dataset synthesizes more than 1,600 meta-analyses of more than 95,000 studies involving more than 300 million students. His meta-analysis of 23 technology influences in education found all of them to have positive impacts on learning when used to enhance high yield pedagogy.<sup>8</sup>

## Implementation

The Mariemont City School District started its student device program with a “Bring Your Own Device” initiative in 2012 and now offers a one to one common device program for its students (currently in grades k-9 and will expand to grades k-12 by the 2020-2021 school year). A one to one program ensures equity in learning, rather than allowing a students' socioeconomic status determine the device type based on affordability. A one to one program is safe. Teachers can monitor students' devices during class and the district can filter content on all devices. A one to one program creates a common learning experience for all students, limits time spent troubleshooting multiple device types and maximizes the district budget.

Classroom instruction in the Mariemont City School District does not require and/or need the use of technology at all times. Rather, technology is only used when the teacher sees it as the most appropriate instructional tool to amplify learning. As professional educators, teachers understand the importance of developing lessons and activities with a balance of screen time and screen-free time – just like any other instructional tool used in the classroom.



**The Mariemont  
City School  
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its students.**

Apps, software and other technology resources are vetted and selected by district curriculum and technology personnel. In addition to tablets and computers, the Mariemont City School District uses a variety of technology tools including virtual reality, augmented reality, 3D printers and robotics.

The Mariemont City School District has many safeguards in place to protect its students. This includes a cloud based internet content filter on every device issued to students. This means that, no matter where the device is, the internet content is filtered. Additionally, students in grades K-8 do not have access to a traditional app store and, therefore, are only given access to district-approved apps. Apps for social media, non-educational games and/or online social networking are prohibited, and the use of school devices is reserved for instructional purposes only.

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<sup>1,2</sup>Hattie, J. (2010). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.

<sup>2</sup>Mariemont City Schools. "Destination 2026," n.d.. Retrieved from <http://www.mariemontschools.org/academics/destination-2026>

<sup>3</sup>Mariemont City Schools. "District Goal, Objectives & Action Plan," n.d. Retrieved from <http://www.mariemontschools.org/about/district-goal-objectives-action-plan>

<sup>4</sup>Moreno, MD, MEd, MPH, FAAP, M. A., Chassiakos, MD, FAAP, Y. R., & Cross, MD, FAAP, C. (2016). Media Use in School-Aged Children and Adolescents. *PEDIATRICS*, 138(No. 5).

<sup>5</sup>Middlebrook, H. (2016, October 21). *New Screen Time Rules for Kids, by Doctors* (News Story). Retrieved <https://www.cnn.com/2016/10/21/health/screen-time-media-rules-children-aap/index.html>

<sup>6</sup>U.S. Department of Education. "Use of Technology in Teaching and Learning," n.d. Retrieved from [www.ed.gov / oii-news / use-technology-teaching-and-learning](http://www.ed.gov/oii-news/use-technology-teaching-and-learning)

<sup>7</sup>The Brookings Institution. "Is Technology Good or Bad for Learning?" n.d. Retrieved from <https://www.brookings.edu/blog/brown-center-chalkboard/2019/05/08/is-technology-good-or-bad-for-learning/>

<sup>8</sup>Corwin. "Visible Learning: 250+ Influences on Student Achievement," n.d. Retrieved from [https://us.corwin.com/sites/default/files/250\\_influences\\_chart\\_june\\_2019.pdf](https://us.corwin.com/sites/default/files/250_influences_chart_june_2019.pdf)