



Health and Safety Best Practices: Digital Devices in the Classroom - Video Transcript

(upbeat music)

Narrator:

As teachers, we strive every day to engage students with a variety of learning experiences so we can meet the needs of all learners.

Advances in technology have made the use of digital devices a powerful option for personalizing instruction and providing learning opportunities that extend beyond the walls of the classroom.

However, we must ensure safe and effective uses of technology for all of our students.

The Maryland State Department of Education and the Maryland Department of Health are committed to providing a safe, orderly, and engaging environment for all students that is supported by high-quality instruction and tools, and by following the recommended uses of digital devices.

(upbeat music plays as text appears on-screen)

Health and Safety Best Practices: Digital Devices in the Classroom

Narrator:

As the use of technology has increased in our schools, concerns and questions have also emerged. Parents, educators, and health professionals are asking for guidance.

The information provided in this video highlights some health and safety best practices for the use of digital devices in classrooms based on the available, evolving research.

Effective integration of digital resources ensures that devices are used to support and enhance learning, not to replace quality instruction.

Effective technology use is purposeful. It promotes active engagement where students are involved in critical thinking, collaborating, creating, problem-solving, and expressing.

The health and safety of students should be the top priority when using digital devices.

When planning, we need to consider the age and developmental level of students and recognize the importance of time limits. Keep in mind that the younger the students are, the less time they should spend on digital devices. We also need to be aware of proper physical conditions for a safe learning environment.

This includes not only ergonomic considerations for good posture and physical comfort, but also the strategic and intentional integration of technology to actively engage students.

Julie Wray, Coordinator, Instructional Technology, Howard County Public Schools:

So when we think about students using digital devices in the classroom what we really like to see is engagement and active learning, and what I mean by that is we want students to be curators and producers of content. And being able to process all that information to demonstrate their knowledge in a variety of ways. So it's really being able to communicate their understanding of the content that is being presented to them.

Narrator:

Educators should consider the amount of class time students spend on digital devices and plan interactive opportunities that will engage students, promote active participation, and provide natural breaks from using digital resources.

Julie Wray:

It's really important to have a well-balanced environment. And by "well-balanced environment" I'm thinking that we don't want to see students one hundred percent on devices. That is not good instruction. We really want to see a variety of environments for our students to gain the knowledge and empower them as learners as well.

As you plan for the instructional use of digital devices, be mindful that research suggests incorporating activities that provide breaks every 10 - 20 minutes.

Equally important to engaging students instructionally is ensuring conditions are optimal for their physical health. Each student's physical position to the computer screen, laptop or other device must exhibit proper ergonomics.

Lori Monroe, OTR/L, Occupational Therapist, Prince George's County Public Schools:

So it's important for us to consider the positioning that the students have at their workstations, because we know that poor positioning can lead to neck and back pain. It can lead to wrist and hand problems, and it can lead to eye strain and headaches.

[full-screen graphic of a black line drawing showing profile of female student sitting at a table with a computer. Text on-screen reads:

Students should:

(bullet point) Use devices while seated upright.

(bullet point) Maintain appropriate distance from screen.

(bullet point) Keep monitors at or near eye level.]

Narrator:

Ideally, each student should use their device seated upright at a desk or table, while maintaining an appropriate distance from the screen, with monitors at or near eye level.

Theresa T. Nguyen, MD, Assistant Chairman of Pediatrics, GBMC:

We usually recommend that children sit in a neutral position, with their feet flat to the ground. And, actually, you want to move your seat so that you're a little bit more on the edge of the seat, and your knees are at right angles between the chair and the floor. Feet flat on the floor. And then what I... you know, I recommend it to my patients is that... put your hands on your shoulders, okay? And go, "Huh... are my shoulders out. Is my heart shining out, are my shoulders straight?" Because when you do that you can definitely feel the hunch, okay? And you can readjust. So that avoids that "turtling" - it's what they call it. It's everything hunched over. And how far should the screen be from your eyes? About 20 inches.

[full-screen graphic of a black line drawing showing profile of female student sitting at a table with a computer. Text on-screen reads:

Knees at a right angle

(bullet point) Use devices while seated upright.

(bullet point) Maintain appropriate distance from screen.

Narrator:

Monitor students' posture, position, and behavior as they engage with technology, and assist those who are misaligned.

Lori Monroe:

Where I feel teachers can have an impact is on monitoring students in the classroom when they're using devices. They should be trying to give good cues and feedback to the students about how their bodies look, how they feel, and encourage the students to obtain materials themselves that they need to adjust their workstations so you are laying down good habits for the future.

Dr. Nguyen:

We realize that children like to move, and it's good for them, actually. It's really good for their brains for them to be in movement. Sometimes children will be carrying their laptops to the floor to work in

group environments. If it's short spurts, less than 20 minutes, it's okay. It's really... the proper ergonomics are key if you're using it for prolonged amounts of time.

Potential eye strain from extended use of devices in the classroom is an important health consideration. A well-lit classroom is also important when creating ideal conditions for using devices.

Lori Monroe:

You want to look at having even lighting throughout the room, so natural lighting is good. Your fluorescent lighting can be good. But you want to make sure that the lighting is even throughout the room.

Dr. Nguyen:

One of the first things I would recommend is to have regular lighting, but not to make it too bright or too dark. So you don't want to turn the lights off in the classroom. It's that bigger contrast between whatever the screen lighting is and the ambient lighting. That's going to cause the eye strain, and that high contrast makes your eyes work harder.

Lori Monroe:

Simple considerations of just making sure you don't see a light source in the screen itself and keeping the monitors clean is going to help reduce glare, because we know that the glare can cause the eye strain. It can cause the headaches.

Narrator:

Built in breaks will help alleviate eye strain.

Lori Monroe:

It's also important to use the 20/20/20 rule. So every 20 minutes, you're going to look away from your monitor and look at something 20 feet away for at least 20 seconds. And encourage frequent blinking so that the eyes can stay moist and have a chance to have a visual break from their work.

Dr. Nguyen:

And get up and stretch. Because prolonged time at the computer also can lead to Computer Vision Syndrome, which is eye strain, eye fatigue, dry eyes, headaches.

You know, this is an evolving field and it's also new to physicians and health-care providers and teachers and parents, so we have to ebb and flow as the research data appear.

Teacher to student: You will get it the more you practice, okay?

Keep students focused on the instructional task when they are using devices.

Monitor the class to ensure that students are not browsing the internet without purpose or playing non- assigned games.

Reward good behavior with social interaction or physical activity instead of screen time.

Promote student collaboration and interpersonal communication skills with on- and off-screen activities. Providing learning options with and without technology supports Universal Design for Learning.

Julie Wray: It's really important for teachers to make sure that they're keeping in mind what access students have at home vs. at school. One of the nice things at school is that we can ensure all students have reliable access to the technology and they can plan for that in their instruction. However, they do need to keep in mind that what they're giving as homework and expecting to do students at home... there needs to be options provided to our students, and not only submitting assignments digitally. But there are options for students to be able to turn it in if they don't have access to those technologies at home.

Narrator: When used effectively, digital devices can help transform teaching and learning. But to meet the needs of all learners, considerations must be made for purposeful application, physical health, environmental conditions, time limits, and active engagement.

Instruction should include a variety of methods and activities with and without the use of technology.

And always design learning experiences that incorporate digital resources as part of a well-balanced instructional day and in consideration of students' health and safety.

Lori Monroe:

When we think about laying down good habits when they're young, we know that it's going to translate
- hopefully - into their adulthood.

Dr. Nguyen:

I think our goal with children is to teach them how to use technology as a tool for their education and for their social life, but not let it be the master of them.

(Music fades)

Narrator:

For more information, visit MSDE's website at http://bit.ly/md_digital to find guidelines and answers to Frequently Asked Questions.

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