

How will good sound shape the future of education?



Powered by Audio: An EPOS Podcast

At EPOS, our passion for audio extends far beyond engineering, product design, and research. We are also curious about the stories behind everyday sounds – sounds that inform, influence, excite, and entertain.

To explore how audio shapes the human experience, we launched *Powered by Audio*: an EPOS podcast featuring industry pioneers who are creating the future of sound.

For [episode 5](#) in the series (How will good sound shape the future of education?), host Randi Zuckerberg spoke with Dr. Arline Bronzaft and Dr. Steven Tello about the role that sound (and noise) plays in the classroom, and how it ties into an increasingly remote learning framework.

Here are some of our favorite takeaways and insights from the episode.

1 Ambient noise has a direct impact on children's learning abilities

Randi: Let's start with your original landmark research. I'd love to know how that came about. What did you find?

Arline: I was teaching a class in Environmental Psychology at Lehman College. At the end of the class, a student of mine came up to me and said, "My child goes to school next to an elevated train track in Upper Manhattan. The train is disrupting their learning and the teachers can't teach. We're going to sue the city of New York."

So I said, "You're going to have to prove that the children's learning was actually disrupted and that



Dr. Arline Bronzaft has served as an advisor to five New York City mayors and is the chairperson of the noise committee at GrowNYC.org. Her groundbreaking research from the 1970s on how subway noise affects children's learning is referenced by professionals to this day.



Dr. Steven Tello is a pioneer of online learning, having helped build one of the first fully accredited university online curriculums in 1996. His professional background as a faculty member, administrator, and vice provost at UMass Lowell makes Tello a distinguished name in his field.

they weren't doing as well in class. You need the data." I went to the principal of the school, asked if I could look at the reading scores of children whose classes were adjacent to the train tracks, and compare them with the scores on the other side of the building.

When we looked at the reading scores by the sixth grade, the children were nearly a year behind in reading. [After accommodations were made to quiet the tracks and install acoustic ceilings in classrooms], I compared them again. The children on both sides – near the tracks and on the quieter side – were reading at the same level.

2 Not all noise is created equal

Randi: Do different types of noise mean different things to the human ear?

Arline: My daughter went to Stanford Law, and guess how she did her homework? She listened to music. And while she's listening to her music, the people upstairs start banging, so she runs out of the room: "Mom! Stop that noise!" Remember, that's noise – but music? Those are beautiful sounds.

3 When it comes to online teaching, practice makes perfect

Randi: Each teacher has a different setup, they have different audio equipment, they have different microphones. So what does that look like for the students on the other end?

Steven: Anyone who teaches in our fully online program has to go through training ahead of time. That gives us an opportunity to help them think about the equipment, the tone, the pace of their presentation, and also the personality that they bring.

It takes time to build a quality online course – your first experience is never good. Even faculty who have gone through our training, we say to them, the first semester is the roughest. You're going to get a product up there, and that product is going to evolve. And you're going to learn things this semester. We want you to do that, we want you to change it, we want you to make it a better product. It'll just get better and better.

4 Audio adds an important layer of engagement that supports retention

Randi: What does it mean to be an auditory learner? How does someone know if they are one?

Steven: If you're looking at slides or you're looking at lecture notes, without the auditory component, it's still possible to miss the important points. So, auditory learning helps things connect in your brain. When you only see [information], you can just file it along. But if you see it and hear it, there's someone saying, "Pay attention, this is important!" Ultimately, it's all about processing information.

So what have we learnt? It's all about the 'how'

Sound plays an incredibly diverse role in the classroom, both online and in-person. It can be a distractor or an enhancer – the difference boils down to how it is presented and how much control we have over the situation. Is noise being inflicted upon us, or is it being used to complement and elevate our experience?

How can EPOS help? In a remote learning setting, the key to maximizing engagement is clear communication between students and teachers. EPOS [headsets for education](#) are designed for long-wear comfort and ease of use: simply plug them in, put them on, and immerse yourself in crystal-clear audio. Whether you're at the [K-12](#) or [university](#) level, our solutions will help you create a dynamic learning environment that enhances focus and retention.

Food for thought: Whether you're a teacher, student, or professional, how intentional are you about your audio environment, and how might you be able to optimize it?

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