

# SUCCESS STORY: Synchrobox: An Innovation from Houston Ballet



## COVID-19 Innovations and Responses

*This is the first in a series of success stories detailing innovations by arts education organizations in response to pandemic-related closures and modifications.*

### About AEP Success Stories

The Arts Education Partnership at Education Commission of the States is a national network of more than 100 organizations dedicated to advancing arts education. AEP has been supported by the National Endowment for the Arts and the U.S. Department of Education since 1995 and is administered by Education Commission of the States. AEP is the nation’s hub for arts and education leaders, building their leadership capacity to support students, educators and learning environments. Through research, reports, convenings and counsel, leaders gain knowledge and insights to ensure that all learners — especially those that have historically been marginalized — receive an excellent arts education. To achieve its goal to expand access to high-quality arts learning opportunities for all learners, AEP gathers detailed information on success stories with the potential to be replicated in communities across the country.

The Success Stories project collects submissions from organizations that highlight successful arts education programs. These stories demonstrate the benefits of arts integration across the education spectrum and promote continued collaboration and learning for individuals and organizations working toward student achievement and success.

In 2021, AEP added a fifth priority area to success stories to capture innovations by partners and affiliates in response to the COVID-19 pandemic. This success story highlights the work of AEP affiliate, the Houston Ballet, and Northworks Automation. This success story aligns with AEP’s new priority area: “COVID-19 Innovations and Responses.”

Arts Education Partnership staff interviewed Jennifer Sommers, director of education for [Houston Ballet](#), about the new [Synchrobox](#) technology developed by the Ballet in collaboration with [Northworks Automation](#). Houston Ballet is a member of [Dance/USA](#), an AEP partner organization.

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## Interview

### What is Synchrobox, and what does it do?

Synchrobox gets rid of a lag between videoconference feeds and between live and remote feeds. The technology is an electrical circuit board that allows two inputs to combine and feed back out to one Zoom videoconference session. In this case, the teacher's mic input and the pianist's input go into one feed so that they go simultaneously into students' homes. You can adjust volume for each of the feeds separately. This system works for both pianists who are live in the studio and those who are playing remotely via Zoom.

### What were the precipitating factors that led to the development of this technology?

Musicality is a huge part of learning to dance. Dancers, especially younger children, need to hear the teacher speaking rhythmically in prompts aligned with music to develop that musicality. In the dance world, we often say the pianist is like the second teacher in the room. When there's a lag, it's difficult for students to know who to follow. Synchrobox syncs the teacher's and pianist's audio so they present as one.

When the Academy closed last year, we first created prerecorded classes and put them up online. When it was clear closures were going to last longer than we anticipated, we started offering live virtual classes via Zoom. At the beginning, the teacher and pianist would log into the same Zoom account and share audio. There are certain things you can do to make it as good as possible, like make sure the teacher talks only while the piano isn't playing, but that becomes problematic when you need to hear both simultaneously. We were grateful to have the members of our Dance/USA affinity group to share ideas and information as we navigated this new environment.

### Who did you need to get involved, and were those relationships you already had or ones you had to build?

Our principal pianist is married to an engineer at Northworks Automation here in Houston. They were talking about the lag difficulties with Zoom, and the engineer said, "I think we can do something about this." Synchrobox was the outcome.

For the most part, we had the relationships we needed to get this done because we have a wide range of expertise within our company. It was crucial to have someone on the design team who actually plays for ballet classes because she knew the ins and outs of the issue.

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## **What barriers did you encounter, and how did you deal with them?**

Everyone’s camera must be on so teachers can provide feedback, and that remote learning necessity quickly highlights the differences in students’ home environments. In a way, this felt like an invasion of privacy and highlighted inequities some of our students face. In person, everyone has the same uniform and participates in class in the same space; the differences aren’t constantly apparent.

Teachers had to differentiate for space in ways we didn’t anticipate. Some students have a 4’x4’ square to move in when we’re used to a wide-open studio space. The first thing teachers had to do was make sure the content of each class was appropriate for limited space. In the studio, students use the large space to engage in stamina-building moves at the end of each class. This is an issue because these moves require lots of space, which isn’t available in most homes.

Teachers depend on providing tactile feedback to students, and they also frequently use proximity to manage students’ behavior in the studio. Right now, teachers can’t do either of those. There’s no remote replacement for human touch or proximity, so we’re still trying to figure it out.

Finally, one thing we didn’t anticipate was how we’ve had to adjust as students started to return to the studio. Our small IT team has been piloting different hardware, like cameras and lighting. At the beginning, the camera was focused on the teacher. The webcams we were using were designed to focus on faces a few feet away in office lighting, and they just weren’t picking up the detail we needed as we moved from summer into fall. Our resident lighting designer set up lights to illuminate bodies rather than just faces, and that has helped. Now, we’re piloting a new camera to broadcast from the studio, which may enable parent observation.

## **If you could go back in time and do the work again, what would you do differently (if anything)?**

I would encourage myself and others to slow down, understand how little control we had and be OK with that. We’ve figured it out now, but we were in triage mode for a long time.

## **Is there anything else you’d like to share?**

The positive side of going remote is we’ve found that anyone can have access to Houston Ballet’s programming no matter where they live. We’ll be keeping a virtual component after the pandemic is over because we’re seeing engagement with new audiences. Normally, we host field trips to Houston Ballet. We’ve created virtual field trips and will be tracking data to

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see how much our geographic reach has expanded. We've had international students and teachers taking classes and workshops with us from their home countries. That isn't something that would have happened pre-COVID.