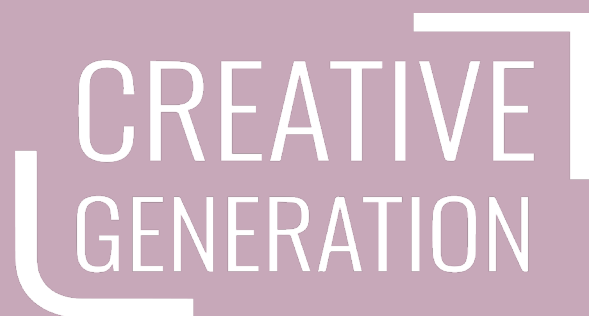# RESPONSIVE REVIEW OF PRACTICE:

Nationwide Perspectives of Virtual Learning, Digital, & Technology Integration in Arts Learning

CREATIVE
GENERATION

CREATIVE GENERATION

Creative Generation believes that youth create change. We are a values-forward, global collective that collaborates with young creatives and those who cultivate their creativity to take local actions towards global changes in pursuit of a more just world. Founded in 2019, Creative Generation operates five signature programs: the Campaign for a Creative Generation, the Institute for Creative Social Transformation, the Academy for Creative Leadership, the Incubator for Creative Impact, and the Foundation for a Creative Generation.
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SEADAE

State Education Agency Directors of Arts Education (SEADAE) consists of those persons at state education agencies whose responsibility is education in the arts. SEADAE was incorporated in 2005 to develop a nationwide infrastructure of arts education peers in state departments of education. Their mission is to support the professional effectiveness of individual members and provide a collective voice for leadership on issues affecting arts education.
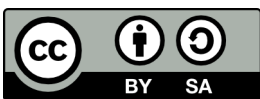*Learn more: www.SEADAE.org*

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Suggested Citation:
Solomon, A., Davis, C. & Poulin, J. M. (2023). *Responsive Review of Practice: Nationwide Perspectives on Virtual Learning, Digital, and Technology Integration in Arts Learning*. Creative Generation. DOI

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UNDERSTANDING A REFLECTION

Conducting a reflection is a research and documentation process designed to elevate knowledge from both knowledge contributors and observers in the process. The process begins by documenting the perspectives of the knowledge contributors — or those whom are sharing their perspectives about a given topic — in the inquiry and concludes with a qualitative analysis through the lens of the observer to draw conclusions and recommend actions.

Creative Generation is committed to publishing reflections as part of its work producing new and honoring existing forms of knowledge and ways of knowing, while dismantling systemic barriers to sharing and learning.

This reflection is organized into the following sections:
- **Introduction:** This introductory section provides details and context around the specific question or observation being explored, the methods of data collection and analysis, and any specific limitations.
- **Key Findings:** This section presents themes identified throughout the inquiry, providing context and texture via amplification of diverse contributor voices and connection to additional resources.
- **Call to Action:** This section described actionable steps which can be taken by the reader to employ learning from the inquiry.

INTRODUCTION

As education and cultural systems continue to grapple with the impacts of the COVID-19 pandemic, those involved in the systems—primarily the decision-makers, policy implementers, educators, and their collaborators—face unprecedented changes. These changes manifest as both challenges to overcomes and opportunities for reform not previously thought possible. State Education Agency Directors of Arts Education (SEADAE) and Creative Generation collaborated to conduct an organizational reflection process to document and aggregate the strong practices in virtual arts learning uncovered throughout the COVID-19 pandemic. This responsive review of practice produced the following report as part of SEADAE's "Leading and Learning in Virtual Arts Education" project.

This endeavor is partially funded by a National Endowment for the Arts grant to support professional development for a network of arts education directors in state departments of education across the United States. SEADAE members are managers of arts education at state education agencies and are responsible for overseeing arts education policy within their jurisdiction for dance, media arts, music, theater, and visual arts.

Throughout the global health crises and to the time of publication, SEADAE members continue to learn and respond to the needs of arts educators and the systems which support them in every state throughout the country. Recognizing the potential of large-scale learning, reform, and scalability, the organization has spent several months aggregating learnings from members; synthesizing ideas to guide members and respective stakeholders when designing virtual arts learning opportunities, considering technology and virtual integration in the standards review process, and developing standards-based assessments; and identifying future inquiries about virtual learning, digital literacy, and technology integration in arts education.

This inquiry sought to understand how virtual learning and other technology and digital resources have integrated into arts education; how technology and virtual learning in the arts existed prior to the COVID-19 pandemic, changed as a matter of necessity through the pandemic, and what stayed in place; and which practices might or should continue to develop and be implemented beyond the pandemic.

The following report reflects the ideas, opinions, and perceptions of SEADAE members in early 2023 and should be viewed as a nationwide review of a snapshot in time, marking perspectives which continue to evolve.

EXECUTIVE SUMMARY

State Education Agency Directors of Arts Education (SEADAE), through its "Leading and Learning in Virtual Arts Education" project, sought to understand:

1. how virtual learning and other technology and digital resources has integrated into arts learning;
2. how technology and virtual learning in the arts existed prior to the COVID-19 pandemic, changed as a matter of necessity through the pandemic, and what stayed in place; and
3. which practices might or should continue to develop and be implemented beyond the pandemic.

Through multiple research inputs - including a systematic review of documented knowledge, a survey to SEADAE members, and in-depth interviews with selected members - this inquiry reflects the ideas, opinions, and perceptions of SEADAE members in early 2023 and should be viewed as a nationwide review of a snapshot in time, marking perspectives which continue to evolve.

Overwhelmingly the participants in this inquiry adopted a futures-oriented mindset about the role of virtual learning environments, digital resources, and technology in arts education. In fact, their ideas, opinions, and perceptions centered around the strategies and tactics which enabled the integration of arts education with virtual learning environments, digital resources, and technology - even spanning the discussions on pedagogy, practices, and public policies.

To engage in large-scale systems change on behalf of departments of education which serve arts educators, the primary drivers are the skills of the arts education leaders - in this case, SEADAE members - themselves. Respondents identified the key skills to be:

- **Efficiency and Communication:** consistent pre-Pandemic and throughout, the use of technologies increased the efficiency and communication in arts learning, expanding the potential, especially in the performing arts.
- **Resilience and Adaptability:** the ability of arts educators to remain resilient and adaptable laid the fertile ground for further developments throughout and beyond the pandemic.
- **Equity in Virtual Resource Accessibility:** the pandemic highlighted disparities, which must be addressed.
- **Importance of Community and Collaboration:** knowledge-sharing among arts educators was and remains crucial for the implementation of responsive changes in practice and pedagogy.

Additionally, this inquiry revealed a number of opportunities and threats for arts education, which must be considered. It is noted that there is perceived liminal sustained change "post-pandemic" and SEADAE leaders must consider the impact of this perception. Finally, there are a number of implications for the future, which SEADAE and its members may consider for their own professional learning and the collaboration they seek with arts educators in their states.

PROCESS & METHODS

From May 2-31, 2023, Created Generation, on behalf of State Education Agency Directors of Arts Education (SEADAE), collected data from the following research inputs:

- A Systematic Review of Documented Knowledge
- A Survey of SEADAE Members
- In-depth Interviews with Selected SEADAE Members

This mixed-method combination was designed to aggregate knowledge learned throughout previous efforts in this multi-year inquiry, inform the responsive review of practice among members during a specific snapshot in time, and provide greater context and texture to aggregate findings from those working deeply within the bounds of the inquiry.

The systemic review of documented knowledge[1] was conducted by Creative Generation in early 2023 and consisted of a thematic analysis of curated materials prepared for SEADAE members as part of their learning on the topic of virtual learning, digital, and technology integration in arts education. This included an analysis of the 370 respondents to an educator survey administered by SEADAE. The survey elevated significant qualitative responses to which a discourse analysis was conducted. Together, the emergent themes from both analyses formulated a preliminary set of recommendations for the design of both the survey and in-depth interviews of SEADAE members, representing a sample of systemic responsive practices implemented across the United States.

A survey was co-created by the teams at SEADAE and Creative Generation, informed by their early learnings and recommendations, and was launched on Friday, May 5th, 2023. The survey was circulated via email through SEADAE's communication channels. It closed on Wednesday, May 31st, with 24 responses from SEADAE members. The survey employed qualitative prompts informed by the systemic review of documented knowledge and was analyzed utilizing both thematic and grounded theory analysis to produce early results to compare with the outcomes of the in-depth interviews. To view the survey protocol, see Appendix A.

An interview protocol was co-created by the teams at SEADAE and Creative Generation, informed by their early learnings and recommendations, and was utilized from May 9-19, 2023. Three in-depth interviews were conducted with selected SEADAE members, whom had participated in the SEADAE engagement with the International Society of Technology in Education (ISTE) in the previous year. Respondents spoke on condition of anonymity and their responses, including any direct quotes have been presented anonymously and in aggregate. The interview protocol employed semistructured prompts informed by the systemic review of documented knowledge and was analyzed utilizing both narrative and grounded theory

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[1] *Conducting an Overview of Documented Knowledge is a research and documentation process, which recognizes the extensive formal and informal knowledge passed between generations of practitioners in the fields of culture, education, and social change. We continually refer to "documented knowledge," in recognition of the deeply-rooted oral histories, cultural practices, and social knowledge passed between generations of key practitioners in our fields, like teaching artists, educators, and culture bearers. These histories and traditions are often unrecognized in Western European academic traditions of "literature reviews" which rely on the publication of the written word; so, we reject this notion and broadly accept the myriad media of 'documentation' and 'knowledge' within these fields of practice.*

analysis to produce early results to compare with the outcomes of the survey. To view the survey protocol, see Appendix B.

Once all data was collected, Creative Generation aggregated the findings across all three research inputs, compared against other data collected throughout it's Ethnographic and Heuristic Approach to Inquiry[2] to engage in a benchmark analysis to guide further inquiry. A preliminary report was produced and feedback was garnered from selected SEADAE members and their supporters.

DEMOGRAPHICS

Creative Generation is committed to amplifying the voices of young creatives and those committed to cultivating their creativity with diverse perspectives. As part of internal and external evaluation strategies - and to ensure the diversity of perspectives represented throughout the work - voluntary demographic data is collected, which helps inform the team, projects, and programs. All data collected is anonymized and disaggregated from any identifying information. All demographic questions were optional.

The demographics of the survey respondents provide valuable insights into the characteristics of the participating SEADAE community. Out of the total 24 survey participants, 22 respondents provided demographic information, resulting in an average age of 50. The presence of respondents spanning different age groups indicates that the survey reached varying levels of experience in the field. This diversity in age can be seen as a strength, as it allows for a wide range of perspectives and experiences to be represented, contributing to a richer understanding of the challenges and opportunities in virtual arts learning.

The predominant racial identification by 17 respondents (81%) as White or of European Descent raises important considerations about the need for increased efforts to promote racial diversity and inclusivity in arts education leadership and within SEADAE. The organization should also explore ways to encourage and support male and non-binary/genderqueer/gender non-confirming (Male at 33.3%, Female at 52.4%, Prefer Not to Say at 9.5%, Nonbinary/Genderqueer/ Gender Non-Conforming / Two-spirit at 4.8%) engagement with SEADAE, and thus their departments. Additionally, the survey revealed that the majority of respondents identified as Straight/Hertosexual (71.4%) and cisgender (85.7%) which highlights the importance of fostering a supportive and affirming space for queer and transgender members.

Furthermore, the majority of respondents identified as non-disabled (15 respondents at 71.4%). This finding underscores the need to prioritize learning about accessibility in virtual arts learning platforms and resources. Ensuring that these platforms are designed to accommodate the needs of educators and students with disabilities is crucial to creating an inclusive learning environment. Emphasizing accessibility in arts education can enhance participation and engagement among all individuals, regardless of their physical or cognitive abilities.

Additionally, as part of the study, ten SEADAE members across the United States were invited

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[2] *Poulin, J. M. (2023, February 7). Devising an Ethnographic and Heuristic Approach to Inquiry. Creative Generation Blog. Creative Generation. Retrieved on 17 July 2023 from https://www.creative-generation.org/blogs/devising-an-ethnographic-and-heuristic-approach-to-inquiry*

for interviews to gain deeper insights into their experiences and perspectives as arts education leaders in their respective states. Among the invitations, three respondents participated in in-depth interviews, elaborating on the experiences and ideas they had shared in their survey responses. Notably, all interviewees identified similarly in terms of social identities and had backgrounds as trained music artists and educators, leading to limited in-depth interview data on other arts content areas. Despite this limitation, the interviews provided valuable perspectives on the experiences of music arts educators in the virtual learning landscape.

KNOWN EXCLUSIONS

The survey does not fully represent the entire arts education community. The lack of data on racial and ethnic diversity might limit the understanding of experiences of marginalized groups by proxy. Additionally, the absence of responses from SEADAE members in certain geographic regions could potentially skew the results. Lastly, it is important to note that this inquiry excludes arts educators currently serving in classrooms. The data collected represents the perspectives of arts education leaders in the state. To mitigate these exclusions, future engagements should aim to reach a more extensive and diverse sample of arts educators and systems leaders (like in districts), ensuring broader representation and insights into their experiences to complement the efforts put forward by state agencies.

KEY FINDINGS

Overwhelmingly, both SEADAE members and their constituents - primarily certified arts educators in their states - focused their work on the forward view, harnessing insights they gained throughout the COVID-19 pandemic and applying it towards structural change in their pedagogies and practices. Further, this same forward-view applied to the increased use of platforms and digital resources and the implementation of new policies which resulted from the pandemic.

When conducting an analysis of perspectives about the context pre-COVID-19, there was a notable lack of consideration by respondents. Instead, they viewed the futures-orientation of virtual learning environments, digital resources, and technology as a net positive.

DRIVERS OF CHANGE

Largely respondents and interviewees described the strategies and tactics which enabled the use of virtual learning environments, digital resources, and technology integrated into arts education. The findings, therefore, are grounded in the skills of arts leaders, rather than the technologies themselves.

EFFICIENCY & COMMUNICATIONS

> *"We also certainly had teachers who are utilizing Google Classroom, to organize their, their, their classes work, you know...having 22 different classes can sort of be overwhelming. And when you're trying to can communicate what you want them to do at home, or communicate with parents having a virtual platform, like blooms are ClassDojo, or even Google Classroom canvas, those sorts of mechanisms were definitely being utilized. But they weren't the heart of, of instruction."*

Prior to the pandemic a key use of virtual learning platforms was for efficiency in data management, file sharing, and communication with students and families. Respondents communicated that technology was primarily used by teachers to manage the logistics of teaching in arts education due to the large numbers of students arts educators are responsible for. Some arts content areas used technology for collaboration or research although virtual tools were not core to the creative/creation process for artmaking. Teachers also used digital tools for evaluation or submission of arts content. One interviewee noted, "So there was some early indications of that before the pandemic, you know, teachers using a lot of things to maybe, you know, just some very, very casual, you know, technology influxes into the the teaching and learning environment. And so not a lot of really in depth and something that is really well thought out, honestly, I mean, to me, the technology and digital learning environments

weren't necessarily woven into the curriculum design and to things like instructional delivery, they were just more of really an enrichment, honestly." The extent to which technology was integrated into arts learning was at the discretion of the teacher and not tied to any core content nor any strong expectation from school districts to implement.

At the same time, some content areas like music, expressed extensive use of technology and virtual learning opportunities prior to the pandemic. One former music teacher explained "music teachers have been using technology. For, you know, a long time, we've been using technology for 25 years, at least. Keyboard labs are now hooked to computers for your composing and arranging and, and all of those multiple programs. I mean, you know, you've got them, they they come on your phone now. Garage Band stuff, things like that. So that kind of technology is not new to music teachers, it's been around, our teachers have been using digital technology, with students." At the same time this same respondent noted," I don't think the idea of virtual learning really came into play in the arts until the pandemic, when everybody was forced to do that."

The pandemic prompted performing arts content areas to consider exploring additional elements of state standards beyond performance. One respondent mentioned that in his state, there was an emphasis on encouraging arts educators to think beyond performance and embrace other aspects of arts education. He expressed the desire for educators to focus on activities such as viewing, analyzing scores, listening, evaluating, composing, and improvising – skills that might sometimes be overlooked when the emphasis is solely on winning competitions. However, it is important to note that this statement represents a personal perspective and aspiration, and we cannot determine if it was fully implemented in practice. Additionally, this study primarily explores perceptions rather than concrete actions taken by educators.

RESILIENCE & ADAPTABILITY

> *"...Dance teachers were teaching virtual classes from their living rooms and creating make-shift studio spaces in their basements. Music teachers were video-taping themselves singing greeting songs and how-to clips for playing guitar. Art teachers learned to use document magnifiers to show particular artistic techniques close up. Media arts teachers flipped their classrooms leaving their class time for sharing student work that the students created between classes. Theatre teachers were delving into reading plays and developing characters or designing sets using digital tools."*

Arts educators displayed remarkable resilience and creativity during the pandemic, embracing technology as a tool to continue nurturing students' artistic abilities and expression. They explored a wide range of digital resources and platforms, from digital projectors to music production software and virtual art galleries.

While some educators found the transition to virtual learning relatively smooth, others faced challenges due to a lack of training and resources. The willingness of teachers to embrace technology significantly influenced successful virtual learning adoption. Educators with

prior experience using devices and the internet as tools before the pandemic had a smoother transition to virtual teaching.

On the other hand, some veteran educators expressed reluctance, preferring traditional teaching methods. One respondent described this by stating, "Our teachers had to just pivot quickly, to be able to determine how do we do this. And so I think we had a bell curve [here], about the adopters of that kind of philosophy and, and who has really excelled with some type of hybrid learning model and incorporating those kinds of systems and digital learning environments into their practice. Some that are our teachers just out of college who are more readily adept at technology to teachers that have been in the field for a very long time and have more years under their belt, so to speak, maybe being resistant to that kind of change technology or not having the knowledge to be able to implement that." The spectrum of teacher experience and comfortably with technology informed the implementation of virtual tools for teaching and learning arts content. Additionally, another respondent commented frankly, "we still have a giant technology gap in this state, we have a really big Internet availability gap across different areas of the state."

Overall, COVID-19 provided an opportunity for teachers to reflect on their teaching. This led to various actions, such as more intentional efforts to connect with students or, in some cases, prompted teachers near retirement age to leave the profession. The possible continuation of virtual classrooms in the 2020-2021 school year nudged them to consider retirement or resignation.

EQUITY IN VIRTUAL RESOURCE ACCESSIBILITY

"What makes all of these useful is if they are user friendly. Folks do not have time to 'figure it out.' We must make it applicable and easy to get to."

The status of virtual learning, digital resources, and technology seemed closely tied to the financial stability and location of schools or districts, with metropolitan areas having better access to resources and more comprehensive virtual learning experiences compared to rural areas. The pandemic highlighted disparities in technology access, leaving many students excluded from virtual learning opportunities, particularly in regions with limited hardware, software, and reliable internet connections. Bridging this digital divide and ensuring equitable access to technology became imperative in fostering inclusive arts education. Understanding the impact of demographics on technology access and experiences underscored the need for tailored support to address the unique challenges faced by arts educators in different regions, ensuring that all students have equitable opportunities for meaningful virtual arts learning experiences.

Several respondents communicated that accessibility to reliable technological tools was a challenge for a portion of schools and students in their districts. For example, one respondent noted, "I will definitely also say though, there's certainly a divide between the the haves and the have nots. So more affluent districts in the state certainly have access to those resources, our more rural districts. Not only did they remain in-person instruction, pretty much throughout the entirety of the pandemic, but really haven't made a lot of investments. And, you know,

some of our school districts are in places where there are not a lot of connectivity. There's some families, you know, high rates of families that don't have access. So I think in a lot of those places, those funds have kind of been used to just help people catch up, to be honest." This example shows that arts education and school districts must work with states to ensure the state has the infrastructure to offer internet and connectivity to all students, especially those in rural areas.

IMPORTANCE OF COMMUNITY & COLLABORATION

"Change, even abrupt as it was, can be the opportunity for teachers to really reflect on what is important in their teaching. I saw teachers making more intentional efforts to connect with students. I heard many schools saying "connection over content"."

Amid the challenges of virtual learning, arts educators turned to virtual communities and social media to connect, share resources, and provide mutual support. These online spaces fostered collaboration, allowing educators to share innovative practices, discuss challenges, and access valuable professional development opportunities. Across the data for this inquiry, respondents articulated the immense focus on resource sharing, collaboration and community. One person noted, "I think it also became easier to have teachers network with one another. One of the main things that a lot of my colleagues and I were doing right at the beginning, was just gathering resources in these giant documents that were like, "Hey, guys, if you're trying to teach creating, in your in this art form, go check out these websites and apps." The creation of these teacher led resources shifted the curricular landscape during the pandemic to a open source, all access model grounded in collective thriving. This aided states that have local control of curriculum by allowing arts educators to increase their awareness and access to digital tools. At the same time, corporate professional development companies began to create digital tools and massively market them to states.

Targeted professional development emerged as critical in enabling effective technology integration among arts educators, supporting their growth in the digital realm. This professional development played a significant role in empowering educators to leverage virtual environments for community building, student exhibitions, and advocacy. Additionally, collaborative initiatives, such as statewide virtual meetings and arts integration meetups, served as spaces for educators to virtually come together, reinforcing the importance of community in times of isolation.

CONSIDERATIONS FOR ARTS EDUCATION LEADERS

Alongside the skills identified by respondents as drivers of change, there were several considerations which may impact the work of those working in systems which support arts education.

OPPORTUNITIES & THREATS IN VIRTUAL ARTS EDUCATION

"Technology of course is great, however we also need [to] realize that the arts need [to] exist away from technology, too. Do students have the physical skills and control to create a visual art piece, perform an acoustic piece of music, sing without amplification or sound mixing, etc. As with many things in life, it's finding the balance."

Virtual learning environments, digital resources, and technology have presented arts education with numerous opportunities to enhance student learning experiences. Live-stream opportunities and one-on-one supports enable real-time interactions with artists and personalized guidance, while the integration of new technologies like 3D printing and AR opens doors to innovative artistic expression. High-quality online resource databases promote inclusive teaching practices, and cutting-edge equipment empowers educators to deliver dynamic arts lessons. However, potential threats must be carefully addressed to ensure effective and safe arts education.

While technologies like ChatGPT show promise in aiding education, they should complement, not replace, good teaching and teachers. Careful consideration must be given to concerns about data misuse, data illiteracy, and privacy to safeguard students' sensitive information. Education for arts educators and arts students about copyright and creative license when using AI generated resources or building art from online repositories. One respondent proposed, "I think the thing that poses the most threat in that whole scenario is just a clarity and an understanding of who holds the copyright to the art that is created when utilizing an artificial intelligence." He went on to describe digital piracy as a threat. Thoughtful guidance and monitoring are needed to navigate challenges posed by social media platforms like TikTok, which offer creative outlets but may also lead to cyberbullying.

Moreover, solely virtual instruction and poor online resources can hinder student engagement and artistic growth. Adequate funding and sustainable investment are essential to establish a robust digital infrastructure that supports seamless virtual learning experiences. Careful evaluation of edtech platforms, apps, and resources is necessary to prevent shallow learning experiences limited to lower cognitive engagement levels. One respondent critiqued, "[Teachers] need to spend more time evaluating how this stuff fits into their curriculum. If it's not curriculum based, if it's just a throw in for something for kids to do to, you know, fill out the time, that's a problem."

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Below are the tools referenced throughout survey and interview responses:

- **Music:** Garage Band, Digital Instruments like Xylo, Soundtrap, Chrome Music Lab, Flat.io, Quaver, Modern Band, Digital Audio Workstations (DAW), Finale Music App, Sight Reading Factory
- **Theater:** Podcast, SoundCloud
- **Arts Education Management:** Google Classroom, Bloom's Taxonomy, ClassDojo, Google Docs, Canvas, NearPod, ClassKick, Google Arts and Culture, WebEx
- **Video Conferencing Systems:** Zoom, Google Meet, Microsoft Teams
- **Devices:** Chromebooks and iPads
- **Facilitation Tools:** Padlet, Menti, PearDeck, Slideo
- **Learning Platforms:** Schoology
- **Creative Software:** Adobe Creative Suite
- **Online Learning Resources:** Smithsonian Learning Lab
- **Advanced Technologies:** 3D printing, Virtual Reality (VR) and Augmented Reality (AR)
- **Social Media Platform:** YouTube, TikToc

Additionally a threat to arts education in the virtual context is even more deprioritization of the arts content in schools. To spend more time on core content like literacy, some schools are pushing arts education to virtual platforms and out of school time. This is a serious threat to the sustained value and access to arts education in public education. Similarly, the advent of virtual schools has increased post pandemic and now the arts education field is left to figure out how to offer quality arts education to students that only attend school virtually.

This poses threats and opportunities. One opportunity is an increase in accessibility for students that can not regularly attend school for medical reasons for hospitalizations. Yet the threats are pervasive. One respondent noted, "And so they're leveraging some some online learning platforms with an actual arts teacher in the classroom as well, to be able to provide that that kind of blended hybrid. Here's a synchronous module with a teacher. Here's some asynchronous work and some asynchronous tasks for the students to complete in pursuit of artistic process. And so I think it's really opened up a lot of doors in terms of that, at the same time, that threat still exists off. You know, there may be some decision makers that feel that oh, this could be provided by a non arts educator now. So making sure that we, we strengthen and understand that yes, the certified arts educator is an important piece of that puzzle, not something that we can just plug in this digital opportunity in lieu of that kind of experience." This comment illustrates the complexities of the threat and opportunities that virtual arts education spaces provide arts educators.

LIMINAL SUSTAINED CHANGE "POST-PANDEMIC"

Arts educators largely returned to the traditional classroom practices after the pandemic, and only limited innovations in virtual learning have continued. One respondent explained, "I'll just say that we're talking about in the post-COVID era. So, in general, everyone has gone back to their original modus operandi. They are, I see. And I hear about new units of study that are being incorporated, you know, whether or not students are working on a recording project during this unit, or whether they are doing pixel art in Google Spreadsheets during this one project that used to be done by hand. So I will say that there are projects that came out of the pandemic that are replacing previously non-technological projects."

Given the collaborative community-focused shifts in resource sharing during the pandemic in some states that have also had a liminal impact, one respondent discussed how new teachers are "thrown all these apps." He responded, "And here, they're just thrown here, all these apps that you can access here, all these tools that we have, that we purchased as a district or as a school, but yet there's no real clear indication of how that fits into the work. Or if they've not received any kind of training on how those materials work, or how those resources work. It can really be a lot of overload. And so we fall back on kind of the old ways as it works. And they'll just go to what they know, instead of utilizing those new resources. So I think it's really important on the training side for teachers to be able to understand, and to see real-world applications of how those tools support what they do in the classroom."

Additionally, one outcome of the pandemic that respondents noted is here to stay is the addition of virtual learning days to be used in place of inclement weather days, sick days, or as a hybrid schooling option. This is a new modality for learning that is present, and schools need to carefully consider how to integrate it effectively into their educational practices moving forward.

IMPLICATIONS FOR THE FUTURE

To foster a bright future for virtual arts education, various stakeholders must collaborate and take decisive action.

As survey participants noticed a "revert to normal" as instruction pivoted back to in-person, it reinforced that educators must continue embracing digital tools and technologies, focusing on professional development, and integrating virtual learning experiences into their curricula as the physical and digital worlds continue to overlap. Additionally, policymakers and administrators must prioritize funding and support for arts education, ensuring equitable access to resources across all schools and districts, addressing the digital divide and investing in cutting-edge technology that will enable students from various backgrounds to benefit from virtual arts learning opportunities and will ensure educators have the necessary skills to utilize technology effectively.

Referring to best practices, education think tanks and working groups can play pivotal roles in developing open-source curricula that promote inclusivity and student autonomy in virtual arts learning. One person stated a recommendation for SEADAE, "so also honoring the fact that we have technology gaps, you know, I would love to see a set of... Crosswalk[s] for digital learning competencies and the way in which they connect to arts education." Schools should also offer mentorship programs and facilitate connections to real-world artists, providing students with enriched learning experiences and valuable insights into their chosen artistic fields.

Moreover, educators should actively engage in sharing their lesson plans and unit designs through open collaborative formats, fostering a supportive and resourceful arts education community. By embracing these collaborative efforts, we can build a strong foundation for innovative and impactful virtual arts learning experiences that empower the next generation of artists and creative thinkers.

CONCLUSIONS

This inquiry has provided valuable insights into the experiences of arts educators and students. It highlights the resilience and creativity displayed by arts educators as they adapted to virtual learning environments, embracing technology to nurture students' artistic abilities and expression. While both offer significant findings, it also recognizes potential limitations in representation and encourages future efforts to engage a more diverse sample.

The research team at Creative Generation curated the following Calls-to-Action. By incorporating these recommendations, we believe, SEADAE can most effectively support arts educators and leaders in navigating the digital landscape and ensuring a more inclusive and technologically enriched arts education environment for students:

- **Emphasize the Importance of Student Voice:** It's essential to prioritize student voice and involve young people in shaping their own educational experiences. Encouraging educators and arts leaders to consider students' journeys and perspectives during this challenging time can lead to more meaningful evaluation, enhanced belonging, improved wellness and mental health support, and foster leadership opportunities for students in curriculum and content decisions.

- **Offer Professional Development and Networking Opportunities**: SEADAE can play a significant role in providing arts educators and leaders with relevant professional development and networking opportunities. This support can enhance educators' understanding of technological tools and encourage effective integration into arts education. Furthermore, SEADAE can facilitate peer-to-peer learning and resource sharing, which can be valuable for educators seeking to expand their knowledge and skills.

- **Address Fear and Ignorance Around Technology:** Providing factual information about technological tools and AI can help mitigate fear and reluctance among arts educators and leaders. SEADAE can act as a reliable source of information, empowering educators to embrace technology confidently and explore its potential as a valuable counterpart in arts education.

- **Advocate for Technology Accessibility in Arts Learning**: SEADAE can advocate for technology accessibility as an integral part of arts education through policy efforts, funding initiatives, and updates to arts standards. By promoting accessibility, SEADAE can ensure that all students and educators have equal opportunities to benefit from digital resources and virtual learning experiences.

- **Embrace Issues of Diversity and Equity:** SEADAE should take a strong stance on promoting inclusivity and representation in the arts education community. This involves encouraging educators to engage in discussions, initiatives, and policy-making that address systemic inequalities and barriers faced by marginalized communities. By providing training and resources on culturally responsive teaching practices, SEADAE can support educators in

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integrating diverse perspectives and voices into curricula and learning materials. Creating a welcoming and inclusive space for students from all backgrounds will foster a more empowering and enriching learning experience for every student. Through championing diversity and equity in arts education, SEADAE can contribute significantly to advancing social justice and creating a more equitable arts education environment.

- **Support Diverse Perspectives and Open Source Resources:** Encouraging the adoption of tech resources that reflect diverse perspectives and cultures can enrich arts education and promote inclusivity. SEADAE can support open-source platforms and initiatives that focus on global perspectives, enabling educators and students to explore a wide array of arts-based technological skills.

- **Collaborate to Address Educators' Needs:** SEADAE can work closely with educators and leaders to understand their needs and challenges in the classroom when it comes to technology adoption. By identifying and addressing these needs, SEADAE can make mindful tech investments that positively impact arts education.

- **Review and Update Arts Education Standards:** SEADAE can review, revise, and reissue updated arts education standards that integrate arts-based technological skills. This will align arts education with the evolving digital landscape and equip educators with the guidance necessary to incorporate technology effectively into their teaching practices.

- **Foster Community and Resource Sharing:** SEADAE can support the creation of community and affinity spaces for educators to collaborate and share resources. These spaces can facilitate intergenerational collaboration and provide valuable support to educators in implementing tech accessibility in their classrooms.

- **Advocate for Increased Technology Funding:** SEADAE can advocate for more technology grant and funding opportunities for educators. Adequate funding will enable educators to access the necessary tools and resources to enhance arts education through technology.

- **Promote Student Autonomy in Learning:** SEADAE can promote the use of browser-friendly resources that focus on student autonomy in their learning. Tools like Incredibox, Chrome Music Lab, and other applications can empower students to explore and create independently, fostering creativity and self-expression.

Overall, we can learn from the experiences of arts educators and envision a brighter future for arts education. Embracing technology, fostering collaboration, and ensuring equitable access to resources will pave the way for innovative and impactful virtual arts learning experiences that empower the next generation of artists and creative thinkers. Together, we can build a stronger, more resilient arts education system that prepares students to thrive in the ever-changing digital world and creates a more inclusive, diverse, and enriching arts education environment that celebrates creativity, fosters talent, and nurtures the artistic potential of every student.

APPENDIX A: SURVEY QUESTIONS

* = Required

PRE-PANDEMIC:

1. [Long Answer] What was the status of virtual learning, digital resources, or technology (consider the pedagogies, platforms, or resources) used by teachers of arts education in your state?*

OBSERVED CHANGES: *Please provide 1-4 sentences of response to each question.*

2. [Long Answer] How did the status of virtual learning, digital resources, or technology change as a result of the COVID-19 pandemic through the following lenses*:
the pedagogies or practices employed by arts teachers
the platforms or resources used by teachers of arts education
the policies - permanent or temporary/emergency - which responded to the pandemic

3. [Long Answer] From your observations, how have arts teachers in your state utilized virtual learning environments for arts education? Please provide an illustrative example, if possible.*

4. [Long Answer] From your observations, how have arts teachers in your state utilized digital resources for arts education? Please provide an illustrative example, if possible.*

5. [Long Answer] From your observations, how have arts teachers in your state utilized technology for arts education? Please provide an illustrative example, if possible.*

6. [Long Answer] If applicable to your work: From your observations how have non-arts teachers (like through arts integration) in your state utilized virtual learning environments, digital resources, and technology for arts learning? Please provide an illustrative example, if possible.*

7. [Long Answer] Considering your above responses, how do arts teachers' use of virtual learning environments, digital resources, and technology compare to before the COVID-19 pandemic?*

IMPACT EVALUATION: *Please provide brief responses or lists of items.*

8. [Long Answer] Considering the timeline of the return to in-person instruction in your state, what elements of virtual learning environments, digital resources, and technology have remained in use for arts education?*

9. [Long Answer] Which virtual, digital, or technological pedagogies, platforms, or resources are the most useful for arts education?*

10. [Long Answer] Which virtual, digital, or technological pedagogies, platforms, or resources are the least effective for arts education?*

11. [Long Answer] Which virtual, digital, or technological pedagogies, platforms, or resources present the biggest opportunity for arts education?*

12. [Long Answer] Which virtual, digital, or technological pedagogies, platforms, or resources pose a threat to arts education?*

FOR THE FUTURE: Please provide descriptive ideas in full sentences.

13. [Long Answer] If time and money were no object, what ideas do you have to integrate virtual environments, digital resources, or technology into...*
- arts learning opportunities.
- arts standards review processes in your state.
- National Core Arts Standards review nationally.
- standards-based assessments.

14. What questions do you have about virtual environments, digital resources, or technology related to arts education?*

Demographics (only used with survey participants): We are committed to amplifying the voices of young creatives and those committed to cultivating their creativity with diverse perspectives. As part of our internal and external evaluation strategies - and to ensure the diversity of perspectives represented throughout our work - we collect voluntary demographic data, which helps inform our team, projects, and programs. All data collected is anonymized and disaggregated from any identifying information and utilized in the aggregate over a period of time. These questions are optional.

15. What is your current age? (short answer)

16. Which reflects your race or ethnicity? (check boxes)
- Asian or Pacific Islander
- Black or from the African Diaspora
- Indigenous or First Nations
- Latinx e/o/a or Hispanic
- Middle Eastern
- Mixed Ethnicity
- White or of European Descent
- Prefer Not to Say
- Other

17. In your own words, how do you describe your racial or ethnic background or cultural identity? (long answer)

18. Is there a location that influences your identity that you don't live in now? If yes, please state. (short answer)

19. Which reflects your gender identity? (check boxes)
- Female
- Genderqueer/ Gender Non-Conforming / Two-spirit
- Male
- Nonbinary
- Prefer to Not Say
- Other

20. Continuing on gender identity, would you describe yourself as transgender? (multiple choice)
- Yes
- No
- Prefer Not to Say

21. Do you consider yourself to be... (check boxes)
- Asexual
- Bisexual
- Fluid
- Gay or Lesbian
- Pansexual
- Queer
- Straight/Heterosexual
- Prefer Not to Say

22. Do you identify as a person with disabilities? (multiple choice)
- Yes
- No
- Prefer Not to Say

23 Please use this space to share anything else about your identities, as you define them in your work. (long answer)

APPENDIX B: INTERVIEW QUESTIONS

1. Please reflect on the time pre-Pandemic, prior to March 2020 about the status of virtual learning, digital resources, or technology (considering the pedagogies, platforms, or resources) used by teachers of arts education? How were they used or implemented?

The following questions consider the changes between the status you just described and the time between March 2020 and the present:

2. Considering your state and observations through your work at ISTE, how did the status of virtual learning, digital resources, or technology change as a result of the COVID-19 pandemic?
- OPT if not considered: the pedagogies or practices employed by arts teachers
- OPT if not considered: the platforms or resources used by teachers of arts education
- OPT if not considered: the policies - permanent or temporary/emergency - which responded to the pandemic

3. From your observations, how have arts teachers (in your state or as brought to your attention through ISTE) utilized the following, specific approaches we are exploring - if possible, please provide a story or a specific education or experience.
- virtual learning environments
- digital resources
- technology

4. Consider the same framing: What about non-arts teachers, like through arts integration?

5. Considering your previous responses, how do arts teachers' use of virtual learning environments, digital resources, and technology compare to before the COVID-19 pandemic?
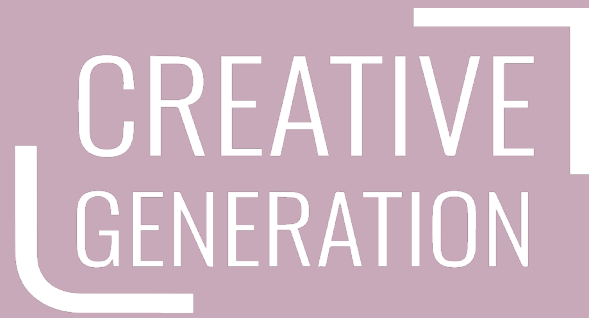
6. Considering the timeline of the return to in-person instruction, what elements of virtual learning environments, digital resources, and technology that you described have remained in use for arts education in the specific context?

7. Please be specific about the best examples or strongest practices of virtual, digital, or technological pedagogies, platforms, or resources which...
- are most useful for arts education?
- are the least effective for arts education?
- present the biggest opportunity for arts education?
- pose a threat to arts education?

8. If time and money were no object, what ideas do you have to integrate virtual environments, digital resources, or technology into the work of SEADAE, like designing arts learning opportunities, arts standards review processes in your state, revision of the National Core Arts Standards nationally, or the development of standards-based assessments.

9. What questions do you have about virtual environments, digital resources, or technology related to arts education?

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