Finding the Rhythm:
Teaching Choral Music During the COVID-19 Pandemic

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Abstract: *The COVID-19 pandemic required choral music educators to abruptly shift their curriculums, expectations, and perspectives to effectively deliver content and meet their student's educational and emotional needs during this unprecedented time in education. This qualitative study highlights the voices of high school choral music educators to gain insight into the challenges they were facing and adjustments they were making one year into the COVID-19 pandemic. Participants also recognized some unexpected benefits of teaching choral music during the pandemic. By understanding the challenges of teaching during the pandemic and investigating the innovations in choral music education, educators can better prepare for post-pandemic instruction.*

Key Words: Personality Trait, Career, Student, Gender

The COVID-19 pandemic closed schools and forced a dramatic shift in curriculum content, delivery mechanisms, and well-being for educators and students across the United States (UNESCO, 2022). As a result of the suspension of in-person learning to prevent the rapid spread of an airborne virus in March 2020, educators were compelled to abruptly transition to remote learning with little guidance or prior research to direct them (Daubney & Fautley, 2020). This sudden adjustment has been referred to as 'emergency teaching' rather than the remote delivery of an organized curriculum (Hash, 2021; Hodges et al., 2020). Although schools had some time to plan for reopening for fall of 2020, those plans varied greatly, with some schools electing to remain fully remote and others opting for a hybrid model of in-person and remote delivery (Marshall & Dorsey, 2020). A variety of instructional configurations were termed "hybrid models," consisting of separate virtual and in-person curriculum tracks, rotation of students through both live and remote instruction, or classrooms of both virtual and in-person students receiving the same curriculum with no alteration in schedules (Bartlett, 2022).

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Due to the dynamic nature of the virus and emerging information regarding mitigation, educators had to frequently adjust curricula and delivery models throughout the pandemic (Daubney & Fautley, 2020). These shifts have been considerably challenging for choral educators, given the content and typical delivery of vocal music courses and reliance on student interaction for vocal modeling, confidence, and community (Kishbaugh et al., 2021; Mikza et al., 2021). Traditionally, choral music instruction has consisted of members singing together in a shared physical space, and choral music educators have relied on this proximity to their singers to provide direction, critique, and instruction (Daffern et al., 2021). During a time of COVID-19 school closures and experimental delivery models, the process of reimagining choral music education led many to wonder whether the remote or hybrid choral environment could ever fully replicate the benefits of in-person choir (Daffern et al., 2021).

A considerable number of studies have been published regarding remote learning; however, this type of inquiry is extremely limited in the area of music education. Hash (2021) explored the use of technology in remote music instruction prior to the pandemic; however, in his examples, technology was used as supplementary material to in-person teaching and did not resemble the complete remote learning environment during the start of the pandemic.

A few studies have described how choral music educators shifted their curriculum to remote setups at the start of the COVID-19 pandemic. In a survey of European and American instrumental and choral music educators, Biasutti et al. (2021) found that educators incorporated more verbal instruction and personalized material in remote education. Individualized instruction was also used by band instructors during remote learning, with a focus on individual practice performances, music listening, and music theory (Hash, 2021). Additionally, participants in this study emphasized the importance of receiving necessary support from administration, colleagues, and technology aids (Hash, 2021). A survey conducted by Shaw & Mayo (2021) described the online platforms most frequently used by music educators in remote learning including Zoom and Google Meet for video conferencing and Google Classroom for learning management (Shaw & Mayo, 2021). Educators from Spain benefitted from the development of digital skills and an increase in knowledge of online programs as a result of teaching remotely during the pandemic. (Calderón-Garrido & Gustems-Carnicer, 2021).

Technologic issues, such as internet access and speed, limited bandwidth, and poor audio quality, were highlighted in several studies on remote music education (Biasutti et al., 2021). Over half of the respondents to a survey of the National Association for Music Education members had to learn a new online learning management system, such as Google Classroom, with limited training from their school districts (Shaw & Mayo; 2021), highlighting yet another technical challenge. Furthermore, audio delay and poor audio quality when using current technological platforms made synchronous remote performance incredibly difficult (Biasutti et al., 2021; Hash, 2021).

Lack of student engagement was identified in the literature as a major challenge in remote learning (Biasutti et al., 2021; Shaw & Mayo, 2021; Spitzley, 2020). Access to technology has been directly correlated with student engagement; Hash (2021) found that student participation was lowest in high poverty areas due to limited access to Internet and remote learning devices. Additional challenges reported by music educators included the inability to provide instant feedback, insufficient realization of achievements, and lack of the usual social relationships (Akyürek, 2020; Biasutti et al., 2021; Calderón-Garrido & Gustems-Carnicer, 2021; Hash, 2021).

Decreases in student engagement and access can have significant emotional implications as music has been associated with a greater ability to manage negative emotions, especially in adolescents (McFerran, 2019; Saarikallio, & Erkkilä, 2007). Using music as a tool to process

negative emotions was even more important during the COVID-19 pandemic for both educators and students. Educators reported higher job-related stress during the pandemic than the general population of working adults; 78% compared to 40%, respectively (Steiner & Woo, 2021) Studies also highlight the responsibility music educators felt for the emotional well-being of their students. In a survey of music educators in Spain during the pandemic, 60.6% of music educators said they placed an emphasis on the emotional content of their music classes (Calderón-Garrido & Gustems-Carnicer, 2021). "Maintaining students' well-being" was a top priority for band instructors during remote learning (Hash, 2021). It is clear music educators desired to create a space for students to navigate some of the emotions of the pandemic in the supportive space of a virtual or hybrid classroom.

As hybrid classroom setups became more common during pandemic teaching, researchers and educators have described how it combined the challenges of both remote and in-person settings. Educators reported difficulties managing multiple technological devices and dividing attention evenly among students when blending instructional models (Bartlett, 2022). These challenges contributed to increased workload for educators, creating a discrepancy between logistics and providing academic and socioemotional support for their students, leading some students to feel like they were being ignored (Bartlett, 2022). Students in the classroom created further stress for educators who were responsible for maintaining masking and social distancing compliance (Schwartz, 2006). Additionally, masks did not allow for the visualization of facial expressions that students rely on for real-time feedback, altering the dynamics of in-person instruction (Kishbaugh et al., 2021).

While challenges have been described in the literature, several studies have evaluated how hybrid learning concepts can be incorporated into classrooms in the future. The benefits of hybrid setups include increased flexibility in the pace of learning, exposure to a variety of learning models, and the ability to learn from any location when online (Srinivasan et al., 2021).

K-12 educators are at high-risk for vocal health problems, and this risk is amplified for choral music educators who frequently sing throughout the day (Doherty, 2011; Schwartz, 2006). Even before the COVID-19 pandemic, choral educators spoke with greater intensity at baseline to control noisy environments and encourage volume from their choirs, and they were often unaware of the damage of their vocal habits (Schwartz, 2006). The addition of mask-wearing since the onset of the pandemic has led to increased voice impairment and total vocal fatigue (Ribeiro et al., 2020). Remote teaching, high stress, poor posture, and poor classroom acoustics have all been associated with increased vocal strain while teaching during the pandemic (Bartosch, 2021; Kishbaugh et al., 2021; Speech-Language and Audiology Canada, n.d.).

The purpose of this qualitative study is to examine the novel ways in which high school choral music educators in a Midwest metropolitan area modified their teaching and content one year into the COVID-19 pandemic. By understanding the challenges and successes of pandemic teaching, educators can better prepare for post-pandemic instruction. We used a qualitative, rather than a quantitative approach, to best understand individual experiences in relation to a shared global situation. We conducted semi-structured interviews to allow participants to respond to questions in a way that reflected their own thoughts and perspectives. We magnified the voices of music educators during a taxing time in their personal and career lives. Exploring the modifications developed by the choral music educators identified potential innovations that should continue to be incorporated into post-pandemic curriculums.

This research was guided by the following questions:

(1) What resources and support have you used to successfully deliver a remote or hybrid curriculum?
(2) What challenges or setbacks have you experienced since transitioning to remote or hybrid learning?
(3) In what ways has remote or hybrid learning affected your vocal health?

METHOD

We chose a qualitative approach for this study to explore how high school choral music educators adapted their approach to teaching during the COVID-19 pandemic A qualitative approach lends itself to open-ended data collection and developing a deep understanding of participants' lived experiences using inductive analysis techniques (Creswell & Guetterman, 2019).

SETTING

This study took place in a mid-sized metropolitan area in the Midwestern United States. Schools in this area were "ordered to operate without students" on April 1, 2020 through May 31, 2020 due to the onset of the COVID pandemic (Blinded 1). After mandated school closures in the spring of 2020, school districts in the state were given discretion to determine their own individual reopening plans at the start of the 2020-2021 school year (Blinded 1). School reopening guidance from the state department of education contained a sequence of phases for individual school districts based on increasing levels of risk and community spread (Blinded 2). This phased approach consisted of remote, hybrid, and in-person instruction based on risk levels (Blinded 2). School districts were encouraged to collaborate with their local health officials to determine COVID risk levels and to create school- and district-specific plans (Blinded 2). Reopening plans for the 2020-2021 school year did not include state-wide mask-wearing mandates; however, schools were able to devise their own mask-mandate policies (Blinded 2). This study was conducted March/April 2021 when schools were continuing to operate under the aforementioned state and individual school COVID policies.

PARTICIPANTS

A member of the research team who had existing connections with high school choral music educators across the metropolitan area sent emails to request their participation. Seven Midwestern public high school choral music educators participated in this study. All choral music educators interviewed were White. Four participants were male and three were female. Participants in this study had been teaching for an average of 12 years. All participants were spending five days per week teaching choral music. At the time of this study, all participants were using hybrid models to teach their students. Participants were using their voice 5 hours per day on average. Additionally, participants were spending about one hour per day practicing for choral performance, .5 hours every day performing, and about 3 hours per day using their voice in their personal lives. Table 1 indicates participants' teaching responsibilities at the time of data collection.

Table 1

Teaching responsibilities of participants at time of study

			Teaching Responsibilities		
Participant	Choir	Show Choir	Music Theory	Private Classes	Other*
1	♪	♪		♪	♪
2	♪			♪	♪
3	♪	♪	♪		♪
4	♪			♪	
5	♪		♪		♪
6	♪				♪
7	♪	♪		♪	

*Note: Includes other non-music teaching assignments such as career planning

DATA COLLECTION

The semi-structured interview consisted of 15 qualitative questions and 10 follow-up demographic questions. We designed the semi-structured interview protocol to feature choral music educators' experiences adjusting to remote instruction and the challenges they encountered while doing so. Initial questions focused on the adaptations made by choral music educators to transition to remote learning, with an emphasis on resources/support, participants' perspectives on the effectiveness of these adaptations, and the quality of remote music education. Then, choral music educators were questioned about challenges and setbacks, both personal and those observed in their students. Finally, the choral music educators provided insight into changes in their vocal health and any steps they have taken to care for their vocal health since the onset of the pandemic. The complete interview protocol is available from the first author.

We conducted the interviews by phone and audio recorded them. Most interviews were completed within one hour. Data Gain transcribed the recordings verbatim. We de-identified the transcripts by replacing participant names with an ID number to ensure participant confidentiality. An IRB was completed and approved for this project.

DATA ANALYSIS

The research team analyzed the collected transcriptions of the semi-structured interviews. Before beginning the coding process, we read each transcript multiple times to ensure familiarity with the data. We used QDA Miner Lite (Provalis Research, 2022) to aid in the coding process by allowing for identification of interview quotations and ensuring assortment of segments into the proper codes. We conducted two phases of coding and analysis: Phase 1, provisional coding, consisted of examining the transcripts and separating the text using a start list of codes based on our preparatory investigation, research questions, and protocol design (Miles et al., 2014). Additional sub-codes emerged throughout the Phase 1 coding process. Phase 2, inductive pattern coding, consisted of organizing the codes into broad categories and themes (Miles et al., 2014). Researchers compared individual interpretations of the interviews and then agreed on the codes through discussion.

We used a variety of strategies to ensure the credibility and trustworthiness of our interpretations (Creswell & Miller, 2000). Throughout the analysis approach, we looked for relationships among our data and the codes we ascribed to them, noting both points of convergence and divergence. During research team meetings, we participated in researcher reflexivity, sharing our own experiences with teaching and learning during the COVID-19 pandemic and reviewing

our interpretations for potential bias. We routinely engaged in peer debriefing, discussing our interpretations with each other and inviting alternate viewpoints to strengthen our understanding.

FINDINGS

Our findings are organized around the three categories related to our research questions and reflected in the interview protocol: adapting vocal curriculum for remote learning, overcoming challenges of teaching singing remotely, and maintaining vocal health.

ADAPTING VOCAL CURRICULUM FOR REMOTE LEARNING

At the time the interviews were conducted, new COVID variants were emerging, and mitigation guidance continued to change. While adjusting to ever-evolving rules and regulations, participants were constantly adapting their teaching practices to continue to provide quality music education. This category of adapting curriculum for remote learning explores how participants adapted their classrooms, approaches, and resources to provide choral music education during a global pandemic. Themes that emerged were *adjusting expectations, revising curriculum, and leveraging teacher resources/support*.

ADJUSTING EXPECTATIONS

Many participants spoke about altering their expectations for themselves and their students during this tumultuous time. Some participants realized the immense toll that learning during a global pandemic took on their students and positioned their classes as safe space free of traditional expectations for learning. One participant shared, "I've thrown anything we would do in a normal year out the window, and just giving us some chance just to recharge our batteries each day." Expectations for all participants were no longer performance-oriented and instead focused on emotional engagement, resiliency, and enjoyment of music. As one participant noted, "The way I've taught in COVID is a bigger picture kind of thing; that we're here to make music and have fun." Many participants spoke about how some expectation adjustments resulted from concern about overburdening students during a very stressful time. "I think that this quarter in this semester, I've done a better job about being reasonable for…what kids can handle."

Participants reevaluated their personal expectations based on the changes they were required to make during the pandemic. One educator explained how they changed their mindset, saying, "I had to just get used to being like…give yourself some grace. Some weeks you'll have it together, and some weeks you won't." Some participants found themselves reexamining the intention behind their teaching, as one reflected, "I've had kind of a philosophical challenge. What is it that I'm trying to teach to students? What is the value that they're gaining from this?" During a school year of rapid change and significant stressors, music educators adapted their expectations to reflect the emotional needs of their students and themselves. They decreased emphasis on performance-oriented aims and focused more on establishing emotional connection and stability. As highlighted by one educator, "This year, we're showing grace. We're kind of loving our kids."

REVISING CURRICULUM

In an era of rapidly changing COVID-19 guidelines and hybrid learning, choral music educators had to be innovative and open to trying new things. As one educator stated when speaking about adjusting curriculum, "I'm not afraid of trial and error." Remote and hybrid schedules completely shifted the structure of music education dynamics during the pandemic. Students did not have their peers sitting next to them, and they were no longer focused on the goal of performing

for an audience. One participant commented on the effect of the exclusion of performances and how this forced a reimagination of the choir curriculum: "We are learning to master skills, and we are learning to make cultural connections, and we are learning much, much more literacy skills than we have in the past."

The academic focus of the remote curriculum for most participants was music theory. These types of assignments did not require students to find spaces to sing or record at home and could also be completed asynchronously. This allowed participants to still deliver meaningful content without encountering issues with synchronicity, privacy, and technology. Furthermore, participants mentioned how COVID restrictions created an opportunity for instruction on these various aspects of music that are often omitted due to time constraints when the focus is on performances. One participant explained that "it has forced us to examine a lot of the other non-performance related elements of music that sometimes get glossed over in the regular classroom because rehearsal takes up so much of our time." Another stated, "It's all that stuff that we wish we had time for. So that was actually pretty fun."

Large group synchronous activities were difficult to effectively perform online, so several participants focused on individualized lessons and solo singing. One participant commented, "So the one thing I did that was most successful is shift to teaching some solos." Another participant used students' free periods for individual voice lessons. This allowed students the opportunity to strengthen their individual performing skills, which are not normally emphasized in a course designed for group singing.

Another major shift in the curriculum structure was the steep decrease in extracurricular choral activities. As one participant phrased it, extracurricular activities were "no a longer a thing." Show choir, musicals, and other specialty choir performances were wiped off the calendar completely. Most show choir competitions were canceled for the 2020-2021 school year, leading choral music educators to grapple with the decision to offer an alternative to their students. If choral educators decided to create and direct a show, they had to adjust their rehearsals to comply with COVID-19 restrictions. One participant spoke about using online videos to continue to offer show choir for his students: "At the beginning of the year, our choreographers were teaching everything virtually." Another participant altered the scheduling of show choir practices to allow students to continue to participate: "All of our show choirs that would normally be extracurricular are during the school day as a class." Several participants also spoke about how they were working to adjust their future extracurricular performances to meet COVID-19 guidelines. Many were exploring outdoor options for musicals and choir performances to allow their students to perform at least once during the year.

LEVERAGING TEACHER RESOURCES/SUPPORT

Continuing to teach choral music and encourage students during a global pandemic required many resources and sources of support. Several choral music educators highlighted the administrative support they received from their schools. As one participant stated, "I really have to give credit to our administration for giving us the latitude to try a lot of different things." Others expressed gratitude for "supervisors in the building and at the district level" and "very good staff support in my district." Most participants felt that their administrations were willing to support them by providing additional funds for choral supplies (e.g., sheet music, drumsticks, technology devices) and ensuring that spaces were reserved in school for distanced rehearsals.

Some participants emphasized how their prior knowledge of technology helped them transition more seamlessly to the remote choral environment. One educator highlighted that they had "always used technology in classrooms," so they were "able to rely on that pretty heavily."

Another participant echoed this sentiment: "I think it was really helpful that I was already fairly tech-savvy." These participants were more comfortable with remote teaching, and they also had the knowledge base to experiment more effectively with different online programs. Table 2 lists the general tools and Table 3 lists the online platforms and software used by participants in this study for remote and hybrid learning.

Table 2
General tools used by participants to deliver educational content remotely.

General Tools	Description	Cost
Cisco WebEx	Cloud-based video conferencing and collaboration platform	$0-$20
Google Classroom	Web-based learning platform where educators can run class online, create curriculum, and share assignments	$0
Microsoft Teams	Collaboration app that allows for messaging, audio and video calling, and file sharing	$0*
Nearpod	Website and app-based instructional platform that allows for interactive presentations and assessments	$120/year
Quiz tools	Game-based learning platforms (e.g., Kahoot, Gimkit)	$0
Video-based tools	Free video sharing website (e.g., YouTube)	$0

*Note: Cost of Microsoft Teams included enterprise license for Microsoft Office suite.

Table 3
Music-Specific Software tools used by participants

Software	Description	Cost
Finale	Music notation software that allows educators and students to create, edit, print, and publish musical scores	$100-$600
Flat.io	Cloud-based music education software that allows for creating, editing, listening, printing, and collaborating on music notation	$6.99/month
Flipgrid	Video discussion tool that allows educators to post videos and students to post video responses	$0
ForScore	App; digital sheet music reader and library	$19.99
iReal Pro	App-based program that provides accompaniment tracks for students to sing with; also allows for creating, editing, and sharing cord charts	$14.99
Sight Reading Factory	Cloud-based application that provides subscribers with music to use for sight reading	$35
Smart Music	Web-based music education suite that provides practice tools, a music library, sight reading builder, and music notation along with teaching tools (assessment support, gradebook, etc.) for music educators.	$80

OVERCOMING CHALLENGES OF TEACHING VOCAL MUSIC REMOTELY

At the time interviews were completed, participants were continuing to deal with shifting guidelines, continued stress, and fatigue from the pandemic's effects on nearly every aspect of life.

The challenges participants were facing during this period included: *conquering technology and access issues, maintaining student engagement, providing timely and relevant feedback, balancing in-person and online instruction in hybrid models.*

CONQUERING TECHNOLOGY AND ACCESS ISSUES

Technology was often cited as a challenge among choral music educators throughout pandemic teaching. Some educators did not have adequate training to use the various technology resources available to them, including devices (microphones, speakers) and apps/online programs. This made troubleshooting very challenging for educators, and they were often unable to assist their students with technology issues during remote classes due to their limited knowledge. Educators also emphasized the limitation of available technology as a frustration. As one music educator pointed out, "There just isn't the technology...for true synchronous singing together...that doesn't require a high level of technology skill or a high dollar threshold."

Participants emphasized the barrier of student access to resources as a significant hurdle in successfully delivering choral content online. Many students had limited access to technological devices and Internet. Students also struggled with finding access to spaces to sing, as described by one participant: "One of the biggest hurdles we have is access to a space for our students to sing and perform. Other people have siblings that are also attending first grade in another room. Or several siblings, each going to their own classes. Or parents that work the overnight shift and they need to sleep." Another participant spoke about receiving "recordings from garages, cars, parking lots, and coffee shops" because students could not find anywhere else to record themselves. These quotes highlight the importance of access to technology, space, and support systems for students at home to successfully participate in remote choir.

MAINTAINING STUDENT ENGAGEMENT

Participating in music classes behind screens created an awkward environment that impacted student engagement. One participant expressed, "Keeping kids online engaged is incredibly difficult…it's so much easier behind a screen to just ignore someone." Additionally, many school districts in this study did not encourage camera use based on student privacy concerns. This made it challenging for students to interact with their music educator and one another. Participants shared concerns about students who were once highly involved during in-person learning no longer being interested in choir. As one participant observed, "students in past years who were some of my strongest performing students sort of fell of the face of the earth."

Many participants wondered if students were missing out on the community aspect of choir when they were participating online by themselves at home. One participant commented that "the purpose of being in a choir is that community and sharing it, and there's very little sharing involved" in online choral classes. While participants sought to create social activities in the online choral environment, they recognized that online choir did not fully replicate the in-person experience, and many elements of social interaction and community were lost. As described by one participant, "A big part of what students are learning from a choral curriculum is how to listen and react to voices around them and working as a team and seeing themselves and their voice as part of a larger whole. And so that piece is totally gone, and I can't replicate that."

Given the obstacles faced by students during the pandemic, many participants were \we've noticed students, especially in our young choirs, choosing not to sing in the future." Music educators shared long-term concerns about transitioning back to a pre-pandemic choral classroom, with one noting, "I think it's going take a lot longer for families and for some kids to start feeling comfortable going back into the normal choral classroom."

PROVIDING TIMELY AND RELEVANT FEEDBACK

Participants expressed frustration with the limitations to provide both real-time feedback and remote educational assessments. With the inability to hear their students performing live, participants struggled to rethink ways to evaluate their students. As one shared, "I'm not really able to give timely feedback because, in person, I can see and hear things right away, and I can give feedback to the students about their singing. And in remote learning, that's not possible." Some participants listened to individual recordings of their students; however, this resulted in a much larger time commitment when grading. Additionally, participants had difficulty creating assessments that accurately reflected the content students were learning online. One participant spoke about adjusting assessments to reflect the curriculum delivered, saying "We're going to be judging them based on what is actually out there for them to be learning." Remote learning restricted the options to provide meaningful feedback—both formal and real-time—to students.

BALANCING IN-PERSON AND ONLINE INSTRUCTION IN HYBRID MODELS

Hybrid models presented a unique challenge for participants as they had to format their classes to meet the needs of both in-person and remote students simultaneously. One participant explained, "When we have kids online and in-person at the same time, we're essentially creating two different curricula." Many choral music educators did not have examples to follow or resources to help them deliver content via hybrid models. As emphasized by one participant, "One thing that I really wasn't ready for was teaching online and in-person at the same time. There was never a playbook for that." Participants found it difficult to rehearse as a choir with a portion of their students singing remotely. One participant illustrated their struggle to divide attention evenly: "Another challenge…is how to navigate specifically singing in a hybrid model…are you involving everyone online? Are you not involving everyone online?" Another described the challenge of "teaching choral music to a very small number of students at various skill levels."

MAINTAINING VOCAL HEALTH

Instructing choral music during the pandemic affected participants' vocal health in a variety of ways. Participants were working to project their voices not only through computer screens but also to large rooms of students spread out to comply with COVID-19 distancing guidelines. They were also dealing with personal stressors that contributed negatively to their vocal health status. The themes contained in the vocal health category are *decreasing vocal load* and *compensating for masks*.

DECREASING VOCAL LOAD

When delivering choral instruction online, many participants found themselves speaking more, singing less, and straining their voices in different capacities to act as vocal models for their students. Several participants noticed that they were speaking more during remote teaching compared to in-person. Participants were also working to project their voices, contributing to increased vocal tension. One educator stated, "I kind of feel like I yell at my computer a lot because I want to make sure the kids online can actually hear me and I'm never really sure whether or not the technology is working super well."

Because remote students were no longer able to hear the vocal examples of their peers around them, educators had to act as vocal models, resulting in many straining their voices to sing outside of ranges that they are accustomed to. One educator described, "I have two sections of

women's choir. I'm singing an octave down, but sometimes I like to model the octave up…so it's been a lot of modeling."

Participants spoke about the vocal practices they put into place to help protect their vocal health during pandemic teaching. Some participants used microphones to help them project and lessen their vocal strain when teaching both remotely and to students spread out in the classroom. One participant was "switching between two different microphones" while another was "using a microphone in the auditorium" to allow their students to hear them without yelling. Several participants also made use of emails or chat functions to deliver instructions and decrease vocal use.

Maintaining awareness of vocal load was important for participants when adjusting to changes in vocal use during the pandemic. As one participant stated, "It's the first time in my career that I've really tried to be intentional about not singing with my choirs, and just doing a lot more listening and being a lot more intentional about overuse."

COMPENSATING FOR MASKS

Masks significantly affected the vocal health of choral music educators, both in their personal lives and while teaching. Several participants spoke about how masks altered their singing and breathing techniques. One participant said that "rethinking some of those vocal techniques as we're working with masks has been a challenge." Several participants also felt like masks acted as a barrier to appropriate fluid intake, with one explaining, "Staying hydrated is harder when you have to wear a mask all the time."

DISCUSSION

This study aimed to highlight the experiences of choral music educators who were teaching remotely or using a hybrid model one year into the pandemic. A qualitative analysis of educators' responses in semi-structured interviews revealed three main categories: adapting vocal curriculum for remote learning, overcoming challenges of teaching singing remotely, and maintaining vocal health. Exploring the perspectives of music educators during this time leads to discussion about lessons learned and future directions for music education post-pandemic.

LESSONS LEARNED

In this study, high school choral music educators identified the adaptations they made to deliver their curriculum remotely or in hybrid models including adjusting curricula, using online resources and administration support, and altering personal and choir expectations. Educators reformed their curricula to provide more individualized instruction, solo singing, and music theory content, in line with previous studies (Biasutti et al., 2021; Hash, 2021). By emphasizing individualized learning and solos, educators avoided the technological limitations of rehearsing synchronously while still delivering meaningful content. Additionally, many educators appreciated the time to focus on teaching the academic parts of music and developing students' solo singing skills—components of music education sometimes missing in the curriculum. As students return to the classroom post-pandemic, music theory and individual vocal development may remain an important element of the curriculum. Dik et al. (2022) put forth several ideas to facilitate increasing attention on individual students including separating larger choral ensembles into smaller groups during rehearsals, allowing small ensembles to continue learning together through virtual setups outside of class time, and creating more co-teaching relationships.

While participants in this study used some of the online programs mentioned in the literature (Shaw & Mayo, 2021), they also incorporated a wide variety of other online music education tools in their remote and hybrid curricula (see Table 2 and Table 3). Music educators may find it helpful to continue using some of these programs in the future to both deliver content and supplement their own teaching. Additionally, exposing students to online music tools allows them to continue exploring, practicing, and creating music outside of a structured curriculum. Importantly, choral music educators will need to maintain awareness of inequities in access to Internet and technology equipment, especially in low-income and rural communities, to ensure that these technological resources can benefit all students.

Most educators reported that financial and emotional administrative support was a major factor in successfully transitioning to remote and hybrid models. Educators felt encouraged to experiment with different online tools. They also received the necessary resources to hold in-person, socially-distanced rehearsals. As students return to in-person learning, administrative support is essential to continue to experiment with teaching tools and improve music education.

Many educators reflected on changes in their goals during the 2020-2021 school year. A greater emphasis was placed on emotional engagement and enjoyment in music to support struggling students during this time. Choir has been shown to help students process negative emotions and increase social connectedness and confidence—beneficial skills for enduring the challenges of a global pandemic (Glew et al., 2020, Hinshaw et al., 2015). Music educators transformed remote and in-person classrooms to meet the students' needs during this difficult time in education and life. To remind others of arts education's vital role in promoting the emotional well-being of students during the COVID-19 pandemic, the National Association for Music Education (NAfME) and 52 other organizations issued the statement "Arts Education is Essential" (National Consortium for Core Arts Standards, 2020). As choral music education transitions into post-pandemic instruction, educators must continue to advocate for arts education's role in supporting students' emotional and social well-being.

It is important to understand the challenges of pandemic teaching to prepare for both post-pandemic instruction and future scenarios. Educators shared concerns about providing appropriate immediate feedback and accurate educational assessments for their students remotely. When teaching remote and in-person students synchronously in hybrid models, educators experienced difficulties with creating simultaneous curricula and dividing attention evenly between the two groups (in agreement with Bartlett, 2022). Facilitating engagement of remote students was particularly challenging. As a result, participants in this study expressed concerns about retention, consistent with other studies of music educators (Spitzley, 2020; Shaw & Mayo, 2021; Biasutti et al., 2021; Hash, 2021). Educators also encountered challenges with creating content that considered students' access to resources. Due to limited access to technological devices and Internet, many students struggled to record themselves singing and complete online assignments. Furthermore, technology itself created many challenges for the music educators we interviewed. Hash et al. (2021) and Biasutti et al. (2021) reported similar issues with resolving problems that arose during class due to limited knowledge of technological devices and software.

As educators modify curricula for the post-pandemic period, it will be vital to acknowledge these challenges and construct solutions. For example, improving software for synchronous choir rehearsal among remote students would allow educators to provide more immediate feedback while alleviating some of the challenges of replicating the choir community remotely. In addition to tools and curricula to support remote music education, understanding students' access to technology and the internet at home is important. Although challenges are clearly present when teaching in hybrid models, educators may want to explore the benefits for post-pandemic education. They may be

able to take advantage of the flexibility in the pace of learning, exposure to a variety of learning models, and the ability to learn and teach from any location when online that come with hybrid models (Srinivasan et al., 2021, Benito et al., 2021).

Pandemic teaching has forced choral music educators to use their voices in unfamiliar ways and in different environments. Speaking into computer screens or projecting to a room of socially-distanced students has stressed music educators' voices (Speech-Language and Audiology Canada, n.d.; Bartosch, 2021; Kishbaugh et al., 2021). Masks have also changed the mechanics of speaking and singing (Ribeiro et al., 2020), straining voices in unique ways. Some of the negative effects of this vocal damage have been immediately recognized (hoarseness, soreness), but the long-term effects of vocal misuse during the pandemic have yet to be elucidated and remain a major concern among choral music educators (Kishbaugh et al., 2021).

LIMITATIONS AND FUTURE DIRECTIONS

The participants in this study were limited to a small group of high school choral music educators from one metropolitan area in the Midwest. Perspectives regarding technological challenges and students' access to resources were specific to the choral music educators included in this study. Additionally, these experiences come from high school choral music educators and do not include the perspectives of pre-K-8 music educators, instrumental music educators, or students, parents, and school administrators. Future research should include a larger sample size from diverse areas and education levels.

This research was a snapshot of perspectives from one moment during a global pandemic that endured for two academic years. Future research should explore perspectives in music education from other stages in the pandemic to provide a more comprehensive overview of adaptations to continue to meet students' needs.

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CONCLUSION

This qualitative study offers further evidence regarding the pandemic adjustments and challenges reported in similar studies. In addition, choral music educators shared how they adjusted the expectations of themselves and their choirs as they adapted to restrictions and remote learning limitations. They also identified how their vocal health has been impacted as a result of modified instructional methods and the steps they took to protect their vocal health. Participants shared the unexpected benefits of teaching choral music during the pandemic including increased emphasis on the academic and emotional components of music education, more exposure to various online music education tools, and exploration of the positive aspects of hybrid educational models.

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