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Review

This article was independently reviewed by two anonymous peer reviewers.

Abstract

This article discusses the development of an Augmentative and Alternative Communication (AAC) choir at a specialist school. All student participants in the choir are non-verbal and use AAC to participate in the music-making, and this way of singing has been developed at the school by a transdisciplinary team including a music therapist and speech language therapist. The creation of the choir and a typical session is described, and relevant literature from other New Zealand therapeutic choirs and speech language therapy is considered. Thoughts on how the choir benefits participants are discussed, particularly through expression of creativity and musicality, opportunities to perform and development of personal voice and identity.

Introduction

Kimi Ora¹ is a specialist school in Wellington, New Zealand for students aged five to twenty-one with complex special needs. Alongside their classroom teachers and teacher aides, students are supported by a team of therapists including speech language, occupational, physio, sport and music therapy. Many students at the school use Augmentative and Alternative Communication (AAC), which is assistive technology used to help a person communicate and control their environment (TalkLink, 2022). In 2021 Hazel, music therapist, and Catriona, speech language therapist, worked together to set up an AAC choir at Kimi Ora School. Permission to discuss the choir in this article has been given by the school.

The initial idea for the choir was sparked by Swanson's online presentation at the World Congress of Music Therapy 2020, titled *Breaking Down Communication Barriers with AAC* (Swanson, 2020a, 2020b). During the presentation, the concept of AAC choirs was mentioned as an idea for incorporating AAC into music therapy.

Hazel:

I was interested in this idea, but on initial research, all I could find on this topic was an interesting video from Cerebral Palsy Scotland (2020), of their AAC choir singing Last Christmas by Wham! In this video, they used their devices to read the lyrics of the song alongside a backing track. I also reached out to Dr Swanson via email, who responded that she wasn't aware of any published literature around AAC choirs specifically (personal communication, January 5, 2021).

Many of the students I was working closely with at Kimi Ora use AAC as their primary method of communication, and I was interested in how the musical structure of a choir could be adapted to include AAC devices. In particular I wanted to find ways in which AAC could be used musically and creatively. I met with Catriona and suggested that we create a choir specifically for students using AAC, and the concept of Kimi Choir was born. This has developed with the support of the school community into a thriving AAC choir with a growing repertoire and opportunities to perform.

¹ <http://www.kimiora.school.nz/>

Literature Review

Therapeutic Choirs in Aotearoa New Zealand

In New Zealand, literature has been published exploring therapeutic neurological choirs, including the well-established CeleBRation and Cantabrainers therapeutic choirs. In a 2013 article, Talmage et al. described the Choral Singing Therapy (CST) protocol used at the CeleBRation choir in Auckland and the music therapist's role within the choir. The protocol has a strong focus on supporting the voice in both singing and speech production, and liaising with specialists such as speech therapists is listed both as part of the music therapist's role and as a recommendation for others implementing the CST protocol. The Kimi Choir design was inspired by the way therapeutic choirs such as CeleBRation use musical activity to practise and develop communication skills.

Through interviews, Talmage et al. (2013) also found that "many participants emphasised the social and musical nature of group singing" (p. 17), and that the choir provided an avenue for social contact and community participation. The choir has given in-house, semi-public and public performances, and the authors report that "Many members have experienced enjoyment, increased confidence and a sense of community service through performing" (p. 29). A study by Jenkins et al. (2017) found that people with a neurological condition who participated in one of the CeleBRation or Cantabrainers choirs "perceived positive improvements including physical, psychological and social benefits as a result of choir participation" (p. 60).

Talmage and Purdy (2021) interviewed thirty-three current and potential neurological choir facilitators in New Zealand. These participants included music therapists, speech language therapists, community musicians, and other professionals, in both rural and urban communities within the North and South Islands. Participants identified physiological and psychosocial benefits of community singing, and common features of the choirs included physical exercises, generally flexible repertoire, and social time with refreshments.

Kimi Choir clearly differs from the choirs explored in these studies in population and approach; most notably in that our students primarily use AAC to participate rather than physically singing with their voices. Further research would be needed to determine whether some of the benefits identified by these studies could also be provided by this type of choir. However, many identified benefits of choir participation are psychosocial (Lee et al, 2018), so it may be that these benefits can still be enjoyed by participants who do not physically sing.

Hazel:

I reflected on this when I attended the 2021 Music Therapy Symposium presentation given by Cantabrainers therapeutic choir (Wade et al., 2021). Whilst the choir activities were focused on speech, including vocal warm-ups, I noticed that the music was a powerful motivational factor for participants to work on areas of communication they had difficulty with. The group energy created a fun and uplifting mood which I feel also happens in Kimi Choir.

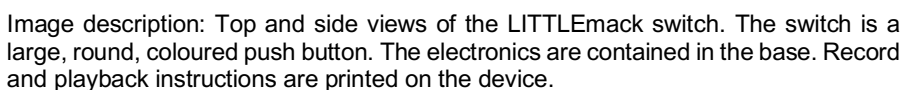
In their book *Creating Music Cultures in the Schools: A Perspective from Community Music Therapy*, Rickson and McFerran (2014) describe non-verbal learners using AAC to play a note as part of a group performance. This takes place in the illustrative vignette *Including Diverse Learners in a Major Music Event in the Community to Promote Inclusion*, a fictional account inspired by real-life projects. They write that "the learners were aware that they had an important contribution to make, and they worked hard to play their part at the right time" (p.73). When describing this account of learners with disabilities engaging in community music-making, they describe participants discussing "musical integrity" and how "our music would be meaningful, not just noise" (p.73). We also feel that a musically satisfying result is important for the choir to be enjoyable and motivating for all involved. The importance of the musicality of the choir was also highlighted by neurological choir participants (Fogg-Rogers et al., 2016; Talmage et al., 2013).

Speech Language Therapy – Developing Your Voice

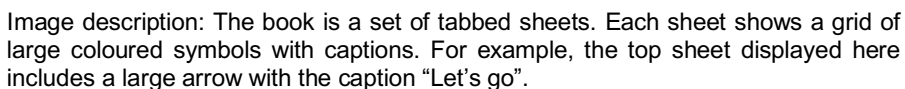
The students in our choir use switches such as a LITTLEmack (AbleNet, 2022; Figure 1) to assist their communication, and as a method to access the world around them. Short messages such as "Yes" or "That's what I want" can be recorded onto these devices. The student can then activate the message independently in a way that works for them, for example by moving their head or leg to press the switch.

Switches are used to enable students to indicate yes or no, which then aids them to access more complex communication devices, such as Pragmatically Organised Dynamic Display (PODD) books (see Novita Tech, n.d.; and Figure 2), and to build relationships. Technology is constantly changing and evolving, and these switches also assist students to participate in activities such as cooking, assistive technology sessions and playing games. One small head, arm or leg movement can open a world of opportunity for these students.

LITTLEmack Switch



Pragmatically Organised Dynamic Display (PODD) book



Beauchamp et al. (2018) discuss the importance of students who are learning to use switches to communicate having access to them throughout the day and across a range of activities. The reasons for this are twofold. One, these switches act as the student's voice, and as such, they should always have access to them, just as each of us has access to our voice whenever we need it. Two, the students are still learning and developing their skills in using their switches to communicate. Therefore, they need to be provided learning opportunities to develop these skills. For students who have additional needs, such as visual, sensory, or hearing impairment, this process may take years to develop. The more opportunities and the wider range of time they have to work on these skills the more likely these students are to develop them.

Also emphasised by Beauchamp et al (2018) was the importance of students learning to use switches through fun and in a non-testing environment. Children learn best when they are in an environment that is motivating and encouraging, with minimal stress (Willis, 2007). Our choir gives students the opportunity to explore their switch and the consequences of using their voice in a fun and safe environment. This assists the students to build confidence in their skills. We have observed students increasing their switch use in choir, and this then led to overall increased switch usage throughout the day. Overall, we want the students at Kimi Ora School to be autonomous communicators (Burkhart & Porter, 2012), able to communicate with anyone, anywhere, and at any time they want. This increases their independence and their opportunities outside of their school environment. The skills that they learn and practise in choir are assisting them to grow into being effective communicators and participants in society.

Shaw (2019) explored what makes a student feel included in their school environment. The key areas identified were the relationships they build, participating in school life, and learning skills that will help them in later life. Kimi Choir gives students the opportunity to work on all three of these aspects. The relationships that they build with both their peers in choir and other students who come to watch choir are strengthened by having a shared interest. They have been able to participate in our school production by singing with the choir, which has helped them to feel more ownership of their performance. And, of course, as mentioned above, the switching skills the students develop in choir help them to be effective communicators and continue to build relationships and participate fully.

A significant benefit of the choir has been having our students participate in waiata, which is a vital aspect of Māoritanga, or Māori culture (Higgins & Loader, 2014). The New Zealand Music – Sound Arts curriculum places

value on traditional and contemporary Māori musical arts, recognising music as a fundamental form of expression (Ministry of Education, 2014). The Kimi Ora School Charter also states that the school is committed to celebrating tikanga Māori through daily use of Te Reo Māori and waiata, supporting the principles of partnership, protection and participation in Te Tiriti o Waitangi. Although as choir leaders we are both Pākehā, we are fortunate to be able to discuss and develop the use of waiata in the choir with other staff including those who direct our Māori learning.

We have a diverse choir membership and we have all enjoyed being able to explore the culture of Aotearoa New Zealand through music. This opportunity particularly aided one of our choir members to achieve her goal of actively engaging in waiata to connect with her own culture. Other students have also enjoyed exploring roles within a waiata, such as students taking turns to be the leader and begin the song, or the exclamations “Aue!” and “Hi aue hi!” which are typically performed by men. Sheehan’s (2017) article about waiata and belonging explored how performing waiata both emphasises Māori identity and additionally helps to foster a sense of connection. This importance of performing waiata gives something that everyone can feel connected by and have in common.

Overall, choir helps our students to foster their voice, both in the physical production of sound and the way they express themselves. It also gives them an opportunity to grow and develop their identity as individuals, performers, and New Zealanders.

A Typical Choir Session

A typical choir session starts with a hello song, welcoming students to the rehearsal. Our numbers vary each week, and we may have up to 14 students as well as several teacher aides, teachers and therapists in the group. Our rehearsals take place weekly during the term and last for around 45 minutes.

We usually have time to sing two songs together during a session, and for each we follow the same pattern. Firstly, Hazel sings the song through, with ukulele accompaniment so that the students can hear all the parts. Then she sings the song again, line by line. Students use their AAC device to choose which line they want to sing, by switching to indicate “yes” in the pause after the line. Hazel or another staff member then records that line on to their switch. Once everyone has chosen a line, we sing the song all together, with students switching to sing their line whenever they wish. Usually, we sing the song through, then switch to humming for a while, so that students can more clearly hear their own and others' switching. We finish by singing again. We

often sing a song two or three times in a session before moving to the next song, giving students time to experiment with when to sing their line. At the end of the session, we sing a goodbye song as students head back to class.

Initially, we started by singing rounds, singing Bella Mama (a traditional song often attributed to the Torres Strait Islands) and Te Aroha (a Māori waiata) as our first two songs. We felt this was a good way to test the concept as these songs are designed to be sung with the lines overlapping. Once we found this worked successfully, we expanded to other short songs, such as the first verse of Me He Manu Rere, part-songs, and adapted longer songs to sing in our style. Since establishing the choir, we have already had the opportunity to take part in several performances within and outside of the school, including the school production and an online national choir event. For performances, we have asked students to choose a line for the performance in advance then practise for a few weeks with that line, to get to know it well. As our repertoire has increased, we have also asked students which songs they would like to perform.

During the session time, Hazel primarily leads the music and singing, and Catriona ensures students' AAC devices are set up correctly and working properly as well as joining in with the music. This is a group that really thrives on the ability for us to work in a transdisciplinary manner, which has been key both in session time and in planning. We have found it invaluable to discuss our observations of how students respond to the songs and the choir format, and how to structure and focus sessions so that students are able to practise the skills they need to use their AAC devices effectively. Additionally, we have been able to work together to meet individual students' communication and music goals; over our time working together, we have found that the goals of speech language therapy and music therapy often closely align in this environment, particularly around participation and the expression of oneself.

Discussion

This method of using AAC in music allows for creativity and self-expression, as students are co-creating the music spontaneously and in the moment. For many of our students, communication through AAC can take quite a long time, particularly to express more complex thoughts, and requires planning or suspending an activity until the message is complete. It is quite different for them to be able to participate in an activity using their AAC in “real time”. Once the initial recording onto their switch is complete, they do not need to rely on someone else to facilitate their participation in the music-making. This allows students the freedom to experience themselves as active musicians

and performers, rather than only being able to make choices that then influence a separate final product.

The choir also provides flexibility for students who are at different stages in their journey with AAC to work on their individual goals within the structure of the same activity. Some students might be working on developing their understanding of cause and effect in using their switch, whilst others might be improving skills of planning and reasoning (Hua et al, 2017). All can still take part in the choir together as their engagement will still contribute in a meaningful way to the activity, and students whose skills are more advanced provide peer modelling for others. The choir rehearsals are a regular space where students can become comfortable and gradually experiment more with their participation within a consistent framework.

Being part of a choir has also provided our students with opportunities they otherwise would not have had. In particular, we were able to take part in several performances across the year taking place within school, outside of school, and online, including taking part in a national event for school choirs. Using the language and structure of a school choir provides a relatable concept for others to understand that we are a music group and respond to us accordingly; it can be difficult for people with no experience of AAC to understand how our students communicate, but a school choir is a known concept and may be relatively easier to include. Having a musical focus has made sure that this endeavour sounds and acts like a choir, and not just a group with a fun idea. Students have used their communication skills to express excitement leading up to a performance and positive feelings after the performance. This links into the Key Competencies in the New Zealand curriculum, in particular Participating and Contributing (Ministry of Education, 2020). Students are actively involved in the communities of the choir and the school, and through the choir can participate in wider community events.

In the illustrative vignette mentioned above, Rickson and McFerran (2014) describe some of the challenges that can be faced by people with additional needs taking part in a less than perfectly designed community event, such as transport logistics, need for extra time and money to be spent, wheelchair access, sensory needs, timing of meals and reorganising class timetables. We encountered all these challenges when arranging for the choir to take part in an external performance, and it was only due to the support and willingness of all staff at the school including teachers, teacher aides, therapists and leadership that we were able to take part. Sadly, the inaccessibility of spaces and events means that it is no small feat for our choir to give a community performance.

Rickson and McFerran (2014) also describe how a performance could be an opportunity "to be accepted and respected in the community", but that there is also a chance that "lack of understanding or intolerance [from an audience] could also have a bad effect on our young people" (p. 70). They describe giving learners space to express whether they would like to be involved and that learners would show their interest by engaging willingly with the activity if they were enjoying it. For our context, the whole school community was again extremely important when consulting with students as to whether they wanted to perform. Teachers and teacher aides were able to discuss the performance and what to expect with their classes and gather students' views, and students had opportunities to express their feelings to different trusted staff members. This helped us to feel confident that students were willing and excited to perform and well-prepared for what they would encounter.

As well as the physical "voice" that our students develop through using switches in fun learning situations such as choir, our students are also developing their own personal voice – that is, to express themselves in a way that suits them and their personality. For a student who uses AAC, their voice plays many roles. Wickenden (2011) spoke to young users of AAC about how they saw themselves. She explored the idea of selfhood and personhood. Selfhood relates to how people see themselves, while personhood relates to how others see them. Any young person will go through this process, but it is especially important for our learners. For example, Wickenden (2011), discussed with young AAC users that they themselves did not see their disability as being a particularly interesting part of themselves. They were more interested in being seen as who they were: funny, cute, or smart. Their families were more focused on what they could do, identifying them as being good friends or siblings. However, they worried that people who did not know them may only see their disability, something they themselves were not particularly interested in, or felt they should be identified as. This means they could have a huge gap between their selfhood and how other people see them. Choir gives our students opportunities to change and challenge both personhood and selfhood. They can be seen, and see themselves, as performers, active participants, and individuals.

Choir has given students a space to explore their identity and how they can express that. They have begun to explore this within the context of a group, including how their voice impacts them and how their contributions uplift and add to that of their peers. This helps our students to develop and maintain relationships and friendships with the other students in the group. Students are also able to explore what aspects of choir are important to them. As well as picking the line that they sing, some students pick the person who they

would like to record their line for them, and how they would like the line to be sung. For one student, her main focus before a big performance is what she will wear. Choir has given us plenty to talk about and explore. In the future, we have plans for how else we can explore our students' interests and identities more, such as rapping, song writing, and exploring repertoire which is meaningful to them. Choir has been such a success largely due to the personalities of our students who bring their own individual preferences, strengths and enthusiasm to the group.

Conclusions and Recommendations

This article explores our experiences as therapists creating and implementing an AAC choir. This has been an exciting experience for us, and we have enjoyed watching the students develop and grow through this process. Student voice is something that we advocate for strongly at Kimi Ora, as we follow our students' passions and create opportunities for them to voice their opinions. A future area of research would be to investigate students' attitudes around the choir, as well as their whānau and school community's thoughts and opinions on the choir. This article has focused on presenting our own professional experiences and reflections in the development of this choir. Delving deeper into student voice would require additional time for individual interviews, further individual consent and overall we felt that this topic lay outside the scope of this article. However, it is an area we are both immensely passionate about and would relish the opportunity to explore this further in the future.

Developing an AAC Choir at Kimi Ora School has been a hugely exciting project, which we believe has created a choir where students can participate actively and creatively as musicians and performers. The choir provides opportunities for students to develop their skills in using AAC, and to give those skills real-world application through choir participation and performances. Transdisciplinary working and support from the entire school community has been a vital part of the journey and has helped to safeguard students' experiences in the choir. Through participation in choir students can develop their voice and their selfhood, form relationships with peers and express their identities to others.

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References

- AbleNet. (2022). *Speech generating devices: LITTLEmack*. AbleNet.
<https://www.ablenetinc.com/littlemack/>
- Beauchamp, F., Bourke-Taylor, H., & Brown, T. (2018). Therapists' perspectives: supporting children to use switches and technology for accessing their environment, leisure, and communication. *Journal of Occupational Therapy, Schools, & Early Intervention*, 11(2), 133-147.
<https://doi.org/10.1080/19411243.2018.1432443>
- Burkhart, L & Porter, G. (2012) *The roads to autonomous communication using aided language*. [Presentation]. ISAAC Pre-conference, Pittsburgh, PA.
<https://lindaburkhart.com/wp-content/uploads/2016/06/precon ISAAC 12 handout.pdf>
- Cerebral Palsy Scotland. (2020, January 8) *Last Christmas by AAC choir* [Video]. YouTube. <https://www.youtube.com/watch?v=oaliP69KLlk>
- Fogg-Rogers, L., Buetow, S., Talmage, A., McCann, C. M., Leão, S. H. S., Tippet, L., Leung, J., McPherson, K. M., & Purdy, S. C. (2016). Choral singing therapy following stroke or Parkinson's disease: an exploration of participants' experiences. *Disability and Rehabilitation*, 38(10), 952-962.
<https://doi.org/10.3109/09638288.2015.1068875>
- Higgins, R. & Loader, A. (2014). *Waiata tawhito - traditional Māori songs*. Te Ara: The Encyclopedia of New Zealand. <http://www.TeAra.govt.nz/en/waiata-tawhito-traditional-maori-songs>
- Hua, X., Adler, R. S., Samsonova-Jellison, O. V., Howarth, G., Clark, A. (2017). *Music therapy for multisensory and body awareness in children and adults with severe to profound multiple disabilities: The MuSense manual*. Jessica Kingsley Publishers.
- Jenkins, B., Storie, S., & Purdy, S.C. (2017). Quality of life for individuals with a neurological condition who participate in social/therapeutic choirs. *New Zealand Journal of Music Therapy*, 15, 59-94.
<https://www.musictherapy.org.nz/journal/2017-2>
- Lee, P., Stewart, D., & Cliff, S. (2018). Group singing and quality of life. In B-L. Bartlett & L. Higgins (Eds.), *The Oxford handbook of community music* (pp.503-524). Oxford Handbooks Online.
<https://doi.org/10.1093/oxfordhb/9780190219505.013.22>
- Ministry of Education. (2020). *Key competencies*. TKI: Te Kete Ipurangi.
<https://nzcurriculum.tki.org.nz/key-competencies>
- Ministry of Education. (2014). *The arts*. TKI: Te Kete Ipurangi.
<https://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum/The-arts/Learning-area-structure>
- NovitaTech. (n.d.) *PODD communication books*. NovitaTech.
<https://novitatech.com.au/podd-communication-books/>

- Rickson, D., & McFerran, K. S. (2014). Creating music cultures in the schools: A perspective from community music therapy. Barcelona Publishers.
- Shaw, E. (2019). 'How do I know that I belong?' Exploring secondary aged pupils' views on what it means to belong to their school. *Educational & Child Psychology*, 36(4), 79-89. [EJ1245934](#)
- Sheehan, M. (2017). Contemporary popular waiata provide a place of belonging. *MAI Journal*, 6(2), 197-207.
http://www.journal.mai.ac.nz/sites/default/files/MAIJrnl_Powhiri_Sheehan.pdf
- Swanson, A. (2020a, September 7). *Breaking down communication barriers with AAC* [Presentation]. 16th World Congress of Music Therapy, Online from University of Pretoria, South Africa.
- Swanson, A. (2020b). Breaking down communication barriers with AAC. In M. Mercadal-Brotons & Annie Heiderscheit, (Eds.), Proceedings of the 16th World Congress of Music Therapy. *Music Therapy Today*, 16(1, Special Issue), 258-259. https://issuu.com/presidentwfmt/docs/mtt_vol_16_n_1/1
- TalkLink. (2022). *Assistive technology*. TalkLink. <https://talklink.org.nz/assistive-technology>
- Talmage, A., Ludlam, S., Leão, S., Fogg-Rogers, L.A., & Purdy, S.C. (2013). Leading the CeleBRation Choir: The choral singing therapy protocol and the role of the music therapist in a social singing group for adults with neurological conditions. *New Zealand Journal of Music Therapy*, 11, 7-50.
<https://search.informit.org/doi/abs/10.3316/INFORMIT.853094511634643>
- Talmage, A., & Purdy, S.C. (2021). Choirs and singing groups for adults living with neurogenic communication difficulties: Semi-structured interviews with current and potential facilitators. *New Zealand Journal of Music Therapy*, 19, 54-85.
<https://www.musictherapy.org.nz/journal/2021-2>
- Wade, K., Reimer, A., & Cantabrainers Choir. (2021, August 14). *Collaboration: Cantabrainers Choir interactive workshop* [Presentation]. Music Therapy New Zealand Symposium: Collaboration, Ōtautahi Christchurch.
- Wickenden, M. (2011). 'Talk to me as a teenager': Experiences of friendship for disabled teenagers who have little or no speech. *Childhoods Today*, 5(1), 1-35.
https://www.researchgate.net/publication/327883136_Talk_to_me_as_a_teenager_Experiences_of_Friendship_for_Disabled_Teenagers_who_have_little_or_no_speech
- Willis, J. (2007). The neuroscience of joyful education. *Educational Leadership*, 64(9), 1-5. <https://www.ascd.org/el/articles/the-neuroscience-of-joyful-education>