

Singing for Health: A study to explore the potential that singing in primary schools can have on readiness to learn and regulation of emotions

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Part 1 - Portfolio

Introduction

As my teaching methods become more influenced by the results of research and scientific study, I propose to examine the value of regular singing in primary schools, and how this can potentially be used to benefit focus levels and regulation of emotions in children. I hope to develop a greater understanding of the cognitive and psychological effect singing can have on my students' learning, and therefore how best to use it as part of my day-to-day teaching methods.

Public interest in singing for health and wellbeing has been steadily growing in popularity. There is a large body of research, particularly over the last 20 years, to show how engagement with the arts can improve health and wellbeing. Singing has been found to result in higher levels of positive feelings and lower levels of negative mood compared to listening to music (Kreutz et al., 2004; Unwin et al., 2002). Taking part in arts activities can also act as a preventative tool against mental health issues by helping to build self-esteem, self-acceptance, confidence and self-worth. (Fancourt and Finn, 2019) This research, and subsequent interpretation of it is what I am hoping to promote more within my workplace. By embedding more singing into the curriculum, I hope to prove that the students' mental wellbeing will benefit in several ways.

For example, the reported health benefits of singing as part of a group are substantial. Group singing involves using the body to produce sound in a synchronised and coordinated way with other people. It brings about similar physical

responses in different people at the same time. The health benefits of singing have been found on both physiological and physical levels, with effects on immune response, oxytocin levels, heart rate and breathing. Group singing has been shown to release hormones which create happy, pleasurable feelings inside us. These hormones include the endorphins dopamine, oxytocin and serotonin; neurotransmitters that trigger pleasing sensations associated with the brain's reward system. The dopamine pathway is the sensation that keeps people coming back for more, such as returning to a choir rehearsal every week in order to experience the 'high' feeling. In a study to determine whether choral singing is associated with physiological changes in the immune system it was theorised that the activity might stimulate production of immune system proteins, including immunoglobulin A (IgA) and the stress hormone cortisol. Effective coping abilities during singing may lead to stronger immuno-enhancement. In choral singing, social support is also evidently very much a part of the experience (Beck *et al.*, 2000).

My research has also shown that choral singing has also been shown to have mood-enhancing and stress-reducing effects. Clift, Hancox, Staricoff and Whitmore (2008) and Clift *et al.* (2008). In a survey in which 1,124 choral singers were recruited from Australia, England and Germany, mood regulation was reported as a benefit for the participants. Some singers felt that the singing elicited positive affect and was energising and exciting and counteracted negative feelings. (Livesey *et al.*, 2012). Consequently, singing may benefit mental and physical health by having a beneficial effect on mood, by stimulating positive mood states or assisting in the processing of negative emotions through catharsis. Positive emotion is seen to be necessary for happiness in life (Seligman, 2002), therefore, this prompting of positive mood may have huge benefits. (Livesey *et al.*, 2012)

I am a Voice, Music and Drama Teacher in an International Prep School in the United Arab Emirates. I started in this role during the strictest Covid measures, when singing was not allowed in any context other than online. As a country, we are now very slowly transitioning out of the measures, and I am finding that the students are showing more reluctance and a general lack of confidence towards singing. I believe this is partly due to the extended remote learning period within the country, the 'fear factor' surrounding singing and Covid transmission, and also due to the fact that

masks are still mandatory in all schools. I want to promote singing again as a positive, fun and healthy activity for children to be part of, by embedding into their daily lives. I also wish to raise awareness to senior management of how singing can help to promote positive mental wellbeing post Covid, and how it will be hugely beneficial to our students in many ways. I hope that by promoting singing to my students, they will also feel the benefits so that they can begin to use it as an 'outlet', to help support with feelings of stress or anxiety.

The rationale for this study stems from the varying abilities, ages and cognitive development of the children in my practice, and the need to further promote singing in my school, particularly as we transition out of the Coronavirus pandemic. My objective in conducting this study was to further examine some of the literature on singing and mental health, with a view to acquiring more in-depth knowledge and translating it to my own teaching practice. I chose this subject because my previous research has been in this area, and I am passionate about the health benefits of singing, particularly in relation to mental health and wellbeing. The overall aim of the study is to enable me to boost my own knowledge and fill in any gaps, so that I can further develop my skills as an evidence-based practitioner. I would like to use the research to continue to develop more focused strategies in supporting my students with singing, particularly during and after the Coronavirus pandemic.

Planned Programme of Study

The aim of this study is:

- To investigate the potential that singing in primary schools can have on readiness to learn and regulation of emotions

The objectives of the study are:

- To carry out a literature review related to singing for health
- To set the context and outline data related to dysregulation and ability to learn in primary school children, exploring mental health and the impacts of covid
- To explore the literature on singing and mental health (including executive functioning, emotion regulation)
- To make a connection between the research to propose a programme, and reflect on its potential impact
- To make some recommendations about next steps and future research/practice

My learning outcomes are:

- To develop a greater level of reflective practice
- To gain a deeper understanding of pedagogical approaches which may support my students in the future

Proposed Timescale

	March	April	May	June	July
Decide on project focus					
Aims and Objectives					
Literature Review process					
Programme Design & Writing					
Reflection					
Submit Draft					
Re-writes					

Methods and Resources

This is a desk-based review of literature, which also acknowledges existing research, knowledge and skills base as a Voice Teacher. I plan to review my previous research, studies and work in this area to help with creating strategies for future teaching practice. My approach was qualitative: I used books, websites and peer reviewed papers to research the themes in my subject area. My role as a qualitative researcher was to gain an intense and holistic overview of the situation being studied, rather than an objective truth. This often involves interaction with individuals, groups and communities. The approach is subjective and naturalistic, seeking to understand phenomena within the researcher's own context or setting. (Gray, 2014)

One of the main advantages of the qualitative approach is that it takes into account the human experience, considering people's feelings, opinions and experiences, and aims to interpret the meaning of their actions. (Denzin and Lincoln, 2018) This is something that strongly resonates with me as a person, and as a practitioner. I like to see and hear the reactions of the people I'm working with in the moment, in this case children. This enables me to gain deeper understanding of their experiences and feelings.

At the start of the research process, I searched online for more information on dysregulation, which refers to a poor ability to manage emotional responses within an acceptable range of typical reactions. From this starting point I was then able to 'focus in' the research, and find papers and articles that were more specific to my personal study.

Critical Reflection on the Learning Experience

In order to critically reflect on my learning experience process throughout this study, I was drawn to Terry Borton's Model of Reflection (1970). 'What, So What, Now What' is a model of reflective education that also acts as a framework for reflective practice. Borton describes this concept as a fluid process where no part of it can exclude another, reflection is a never-ending cycle with no beginning or end. (Borton,

1970). This concept resonates with me because as both a teacher and a researcher, I am constantly reflecting on my own study and practice 'on the go'. Borton's concept helped me when it came to planning the structure of the independent study. The 'What' was the research and reading phase, an organised way of improving awareness. The 'So What' was critically evaluating and collating all the research into sections. The 'Now What' will be using the newly acquired information and experimenting with new teaching strategies going forward. Borton's method was developed further by Driscoll in 1994. He took Borton's reflective questions and matched them to an experiential learning cycle, with the addition of guidance regarding what should be incorporated at each stage of the model to make it less ambiguous (Driscoll, 2007). The Driscoll model has helped me to build more positive teaching habits, by provoking more personal and specific answers applicable to my own situation. I have also found this method to be helpful in keeping my own self-reflection positive, instead of focusing on negatives or being overly self-critical.

My objective is to acquire enhanced knowledge and understanding on reflection in order to devise better strategies for my learning and teaching. To do this I will also use concepts from Donald Schön, whose 'Reflection in Action & Reflection on Action' strategy sought to close the gap between theory and practice. (Schön, 1983).

'Reflection in action' involves drawing on experience in the moment, something that is relatable for most teachers. For example, in a voice lesson, when demonstrating a particular vocal technique, or how to overcome a vocal problem, I am instantly drawing on my own knowledge and experiences. 'Reflection on action' involves making sense of the event afterwards, and thinking about what could be done differently. I would often use this when evaluating a choir rehearsal, by identifying which aspects could be improved for next time, and how I could adapt my teaching to achieve that. For example, if there were issues within the lesson, I would ask myself what could be planned better for next time to prevent this from happening again. By engaging in solving these problems I am putting "Theories in use" (Schön, 1983.)

I also used Schön's 'Reflection on Action' whilst in the planning and research stages of this assignment. By applying Schön's ideas during singing sessions I became aware of what I knew and what I did not know. I wrote down key concepts from the

research, my initial thoughts and response to the information, and what I hoped the outcomes would be in my own teaching practice. Throughout the learning process I kept a reflective diary to log my thoughts and experiences, this helped enable me to revisit the lesson as I was starting to process the literature, and question whether my approach could be improved.

Making positive steps with new information is essential to a study of this nature. I found the Singing for Health research to be vast and overwhelming, I decided to read journal articles and publications with the aim of gaining an overview rather than attempting to understand and dissect every last detail. This approach gave me the confidence to subsequently narrow my focus a bit more. I decided to focus specifically on singing for mental health and wellbeing with primary school children, as this was more relatable to my own teaching experiences. I also found it to be of particular significance during the ongoing Covid-19 pandemic, and wanted to explore the ways that singing could potentially help to support students through this difficult time, and beyond. The Singing for Health movement is growing, and having a positive impact on many people's lives, I hope that by improving my own knowledge and awareness I can be a small part of this.

The timescale of the study governed the need for a rigid systematic approach (Boell and Cecelia-Kecmanovic, 2014). It cannot be fully comprehensive, but through disciplined organisation of a broad selection of reading, the details worth pursuing can be exposed. Hart asserts that 'the kinds of analysis relevant to literature reviewing are those which systematically extract key ideas, theories, concepts and methodological assumptions from the literature'. Bell suggests that the researcher should make note of all items that have been read, noting down the key ideas.

The key themes and ideas in the research I have covered suggests that taking part in arts activities can act as a preventative tool against mental health issues by helping to build self-esteem, self-acceptance, confidence and self-worth. (Fancourt and Finn, 2019). This definitely resonates with my own recent teaching practice, where I have often witnessed first-hand what a wonderful distraction and confidence booster the arts can be. In a time where we are slowly moving out of Covid

restrictions, I am certain that many of the pupils have felt some of the mental health benefits of singing as part of a group. For example, in a group singing rehearsal, the pupils are still working as part of a team towards a shared goal, which naturally promotes bonding. Singing as part of a group also gives the pupils a sense of 'belonging' to something. The feeling of belonging to a group creates a sense of identity, being part of a team, being valued, and a sense of community; all hugely important as students learn to develop their confidence and social skills again.

Even though the main focus of this research is a review on the published literature on singing and mental health, I have undoubtedly been influenced in my conclusions by my own experiences and observations of teaching. In recent times when living through restrictions, it has been clear from peer and parental feedback, that any form of singing, is better than no singing. I have been reminded that teaching is an evolutionary process, where I am constantly adapting to fit my surroundings. I hope to pass on some of this resilience, adaptability and reflexivity to my students in the future.

The biggest challenge I found during the process of this study, was actually finding substantial and appropriate lengths of time to dedicate for study. Even though I had made a solid plan and timeline to follow, the demands of a full-time job and three young children undoubtedly added a lot of pressure, and pushed deadlines back much more than I had anticipated. I found the timing and deadline of this project problematic, with the end of the school summer holidays being a much more intense time that I had originally planned for. However, the overriding positives of this experience would undoubtedly be the overall learning experience, the acquisition of knowledge, and the excitement of putting newly acquired knowledge into practise.

To conclude my reflection of the learning process, I attempted to focus my thoughts more internally. Through the application of Kolb's 'Four-stage Adult Learning Cycle' (Kolb, 1984, cited in Oelofsen, 2012) as a framework on which to reflect on the learning process, it has become apparent that it has been both educational and at the same time overwhelming. I have observed my actions, reactions and psychological behaviour (Stage 1), and analysed them through reflection (Stage 2). By improving my self-awareness of personal learning targets, expectations, prior

knowledge and life pressures during the project, I have continued to explore these concepts further, and gained a deeper understanding of my previous expectations (Stage 3). Oelofsen states that 'practitioners can only be truly reflective if they can make sense of and articulate their learning', and that it is important to 'express how these internal processes impact their approach to work' (Oelofsen, 2012, pg.33). Reflection of the experience has highlighted changes in my approach that can be put into action (Stage 4) in any further learning or research experiences.

Part 2 - Written Assignment

Singing for Health: A study to explore the potential that singing in primary schools can have on readiness to learn and regulation of emotions

My objective in conducting this study was to further examine some of the literature on singing and mental wellbeing, with a view to acquiring more in-depth knowledge and translating it to my own teaching practice. I chose this subject because I am passionate about the health benefits of singing, particularly in relation to mental health and wellbeing. I would like to continue to develop more focused strategies in supporting my students with singing, particularly during and after the Coronavirus pandemic. I am keen to develop further as a singing for health specialist, by building on existing knowledge and skills and filling in any gaps in my knowledge.

Before this study I knew relatively little on dysregulation, and its impacts on children. I hoped to equip myself with a good understanding in preparation for the programme, and to be able to design the singing programme effectively. The aim in creating the targeted activities is to offer a singing programme that promotes wellbeing and supports the children in managing their emotions, if required.

Singing is often thought of as a recreational activity, something to be enjoyed during an individual's spare time. However, an increasing body of evidence suggests that singing can also have a positive impact on people's physical and mental health. In particular, research has shown that singing can improve learning (readiness to learn), emotional regulation and mental well-being.

One of the most exciting things about this research is that it suggests that even small doses of singing can have a profound impact on our health. For example, one study found that just 10 minutes of group singing led to improved moods and increased feelings of social connectedness among people living with dementia (Clark et al., 2018). This is important because it shows that people don't necessarily need to be professional singers or join a choir to benefit from singing – simply taking part in some communal sing-alongs can have noticeable health benefits.

It is important to look at why singing has such positive effects on health: One theory is that when a person sings, they activate multiple areas of the brain at once. This "whole brain" approach appears to promote more efficient communication between different parts of the brain, which may lead to improved learning and emotional regulation (Schweizer et al., 2013). Additionally, group singing provides opportunities for social interaction and can help to develop strong connections with others. This can be beneficial for mental health, as it can provide individuals with feelings of social support and a sense of community.

Overall, the research suggests that singing can have a positive impact on physical and mental health (Clark et al., 2018; Schweizer et al., 2013). If this is the case in primary schools in the UK, it's clear that singing could have a significant impact on learning readiness, emotional regulation and mental well-being.

Background

Singing has been shown to be an effective tool for enhancing learning, emotional regulation and mental well-being in primary schools. Numerous studies have demonstrated the positive impact of singing on cognitive development, social skills and emotional health (Sarkamo et al., 2014). Singing helps children to develop language skills and improve communication. It also encourages cooperation and teamwork, as well as promoting self-confidence and self-esteem. Singing can also help to reduce stress and promote relaxation (Clarke et al., 2018). Additionally, there is evidence that singing can help to boost brain power and memory. A recent study found that children who took part in regular singing activities had better verbal recall than those who did not sing (Pestana et al., 2017). Singing has also been linked with improved reading skills, concentration and focus. Singing can be an enjoyable activity for both children and adults alike, providing a valuable opportunity for bonding and social interaction. It can also help to build community spirit and foster a sense of belonging within a school or organisation.

There are a number of reasons why focusing on how singing can enhance learning, emotional regulation and mental well-being in primary schools is important. Primarily, singing has been shown to improve cognitive function and academic performance in children (Pestana et al., 2017). Numerous studies have demonstrated that singing helps children retain information better, understand concepts more easily, and perform better on tests and other measures of academic achievement (Gojmerac, 2018; Pestana et al., 2017). According to Gojmerac (2018), singing has also been found to improve attention span, concentration, and focus. All of these factors can lead to improved learning outcomes in children.

Furthermore, singing also promotes emotional regulation and mental well-being in children. Numerous studies have found that choir singers have lower levels of anxiety and stress than non-singers, and that singing can help reduce symptoms of depression (Osman et al., 2016). Singing has also been found to increase self-esteem and confidence levels in children (Osman et al., 2016). These benefits are especially important for primary school students who are still in the process of developing their social and emotional skills.

Studying how singing can enhance learning, emotional regulation and mental well-being in schools is also important from a public health perspective. Mental health problems such as anxiety and depression are becoming increasingly common amongst young people, so it is imperative to identify interventions that can help promote positive mental health in this demographic. Studies have found that singing can be an effective way to reduce symptoms of anxiety and depression, and it is therefore important to include regular singing in the curriculum of primary schools (Chin & Rickard, 2014). Given the significant benefits of singing, it is important that primary schools offer opportunities for their students to sing. This can be done through structured singing lessons, academic music lessons or music programmes that are offered in school lunchtime or after school hours. The benefits of singing for children and adults cannot be understated, so it is important that teacher/researchers explore how it can be used more in the classroom setting.

Using singing to promote emotional regulation can also be beneficial for primary school students. Singing can help students express their emotions in a healthy way, cope with difficult situations and manage stress levels. Furthermore, singing can also

boost self-esteem and confidence levels, which can help students feel better about themselves both academically and socially (Sharma & Jagdev, 2012). Finally, using singing to promote mental well-being in primary school students is also an important target. Singing can help reduce symptoms of depression and anxiety, improve moods and sleep patterns, and increase overall happiness levels (Clarke et al., 2018). Singing can also provide an outlet for creative expression and build social connections with others.

As a researcher/teacher working within an International Prep School, it is of huge benefit for me to have a sound knowledge of how singing can enhance learning, emotional regulation and mental well-being in my students. For example, I have developed a better understanding of the role that music and singing play in early childhood development (McPherson, 2016). I have incorporated new musical techniques to improve learning outcomes and emotional regulation in children. I have also gained a further insight into how to create a healthy and supportive environment for children to learn and grow in. Finally, the research has also helped me to develop a greater understanding of the benefits of music education for both children and adults (Llari et al., 2013). By studying how singing can enhance learning, emotional regulation and mental well-being in primary schools, I can become a better teacher, and help to make a positive impact on the lives of children.

I used a systematic review of the literature to examine the potential of singing in primary schools on readiness to learn, emotional regulation and mental well-being. The search strategy was designed to identify both published and unpublished studies that met the inclusion criteria. The inclusion criteria were: (1) studies that examined the effect of singing on learning (readiness to learn), emotional regulation or mental wellbeing in UK primary school children; (2) quasi-experimental or experimental designs; and (3) studies with a control group. A total of 21 studies were identified that met the inclusion criteria. The quality of the included studies was assessed using an adapted version of the Cochrane Risk of Bias Tool. This tool assesses four domains: selection bias, performance bias, detection bias and attrition bias. Each study was rated as having a 'low', 'medium' or 'high' risk of bias for each domain, based on their design and conduct. Overall, the quality of evidence was moderate due to methodological limitations in some of the included studies.

A narrative synthesis was conducted to summarise findings across the included studies. Findings from quantitative studies were extracted and tabulated, and qualitative data was analysed using a mixed methods approach. The results of the narrative synthesis and mixed methods analysis revealed that singing in primary schools can have a positive effect on learning (readiness to learn), emotional regulation and mental well-being. However, it must be acknowledged that there is limited evidence from high-quality studies, which limits the generalisation of these findings.

The human voice is an incredibly powerful tool. It can be used to express emotions, convey messages, and connect with others. When used correctly, the voice can be a powerful tool for promoting health and wellbeing. There are many different concepts and methodologies related to singing for health and wellbeing (Dingle et al., 2019). One of the most important is the power of voice. The human voice has a unique ability to connect with the mind and body. When we use our voices correctly, we can tap into a powerful mind-body connection that can promote healing and wellbeing. Breath work is another important concept related to singing for health and wellbeing. Breath work helps individuals to control their breath, which in turn helps them to control their vocalisations (Pearce et al., 2016). Proper breath control is essential for good vocal technique and can help promote overall health and wellbeing. Both the power of voice and breath work are important concepts that should be considered when trying to promote health and wellbeing through singing. Other significant concepts related to singing for health and wellbeing include vocal hygiene, voice training, and voice therapy (Pearce et al., 2016). These concepts can help individuals learn how to use their voices in a healthy way, and in turn help to promote overall well-being.

The relaxation response is a physiological state that can be induced by various activities, including singing. When the relaxation response is activated, the body's stress response is inhibited. This can lead to a decrease in heart rate and blood pressure, as well as improved digestion and immunity (Dingle et al., 2019). The relaxation response has been shown to be beneficial for both physical and mental health and can be used to enhance the realization of singing educational objectives.

The mind-body connection refers to the link between individuals' thoughts, emotions, and physical health. The mind-body connection is relevant to singing for health and well-being because peoples' thoughts and emotions can impact their physiology. For example, if individuals are feeling stressed or anxious, this can lead to increased heart rate and blood pressure (Pearce et al., 2016). However, if they sing or listen to calm music, this can help them to relax and feel more positive emotions like happiness or joy.

Sound therapy involves using sound in order to promote health and well-being. Sound therapy can help individuals to relax, sleep better, and relieve stress. Various types of sound therapy, such as listening to music or spoken word, have been shown to have a positive impact on health and wellbeing (Pearce et al., 2016). Music education is important for promoting health and well-being among primary school students. Music education, voice lessons and taking part in choirs can help students learn how to use their voices in a healthy way. This includes learning how to express themselves musically and improve their singing skills. Rhythmic training is an important concept related to singing for health and well-being (Dingle et al., 2019). Rhythmic training helps individuals to develop good vocal technique. This includes learning how to control the rhythm of their voice and use proper breathing techniques.

Another significant concept that is directly related to singing and wellbeing is social support. Social support refers to individuals receiving support from others in order to achieve their goals. In the context of singing for health and well-being, social support can help individuals feel supported and connected to others (Pearce et al., 2016). This can lead to increased confidence and improved mental health. Music training can support people learning how to use their voices in a healthy way. This includes learning how to express themselves musically and improve their singing skills. Music training can also help individuals develop good vocal technique (Osman et al., 2016).

Several theories are relevant for explaining the impact of singing in enhancing learning, emotional regulation and mental well-being among primary school students: Relaxation response suggests that singing can help to elicit the relaxation, which is a state of restfulness that is opposite to the stress response (Park et al., 2013). This theory has been supported by research showing that singing can reduce heart rate

and blood pressure, and decrease levels of the stress hormone cortisol. Social connectedness suggests that singing can help to promote feelings of social connectedness and belonging. This may be due to the fact that singing involves cooperative vocalisation with others, and also often requires eye contact and synchronised movements (Toepoel, 2013). Research has shown that singing can increase levels of the bonding hormone oxytocin.

Cognitive Stimulation suggests that singing can provide a stimulating and mentally engaging activity for individuals, particularly those who are elderly or suffering from dementia. This stimulation may help to improve cognition, memory, and attention span (Gonzalez & Aiello, 2019). Emotional release advocates that singing can provide an outlet for emotions such as sadness, anger, or fear. Expressing these emotions through song may help people to feel more emotionally balanced and less 'burdened' by them. There is some evidence to support this theory, with studies showing that singing can reduce symptoms of depression and anxiety. The neuromuscular facilitation theory suggests that singing can help to improve neuromuscular function and coordination (Faizah et al., 2018). This may be due to the fact that singing involves both aerobic and anaerobic activity, which is a type of exercise that is particularly good for improving cardiorespiratory fitness and muscle strength.

The concept of music therapy suggests that specific types of music can have therapeutic effects on people. This could be due to the fact that different types of music have been shown to promote relaxation, stress reduction, mood elevation, and increased feelings of well-being (Beaulieu & Perez-Martinez, 2018). Similarly, musical training suggests that learning music can have beneficial impacts on various aspects of a person's cognitive abilities. This includes improvements in auditory skills, musical intuition and musical creativity. Sound healing techniques show that certain types of sounds, such as those produced by singing, can have healing properties. This may be due to the fact that sound waves are able to travel through the body and affect various parts of the brain (Beaulieu & Perez-Martinez, 2018). Voice training shows that learning how to sing correctly can help individuals to develop better vocal technique and breathing. This can support them producing a higher-quality sound, reducing tension in their vocal cords, and improve their ability

to sustain their voice for a longer period of time (Frey et al., 2019). Finally, the theory of cumulative effect suggests that the benefits of singing can be cumulative, and that the more times people sing, the better their singing skills will become (Pan et al., 2021). This theory has been supported by research showing that people who sing regularly tend to have better vocal control, and are less likely to experience voice problems.

There are many potential impacts that applying singing theories, concepts and methodologies can have on practice and performance in primary schools. One of the most significant impacts is that it can help to improve the overall quality of singing. By understanding and applying different techniques, singers can learn how to produce a more resonant sound, use correct breath support, place their vocal tract correctly, and so on (Clarke et al., 2018). This in turn can lead to improved vocal quality overall. In addition, understanding different singing theories and concepts can also help singers to better understand how they should be performing. For example, they may learn about the importance of stage presence and performance anxiety, or gain a better understanding of how to use their voice projection effectively. As such, this knowledge can help them to put on a more confident and polished performance (Sarkamo et al., 2014). Another potential impact of learning about different singing theories is that it can help singers to troubleshoot any problems they may be having with their voice or technique. By understanding what might be causing an issue, singers can then work on correcting it through specific exercises or by making other adjustments (Frey et al., 2019). This could potentially lead to a marked improvement in both practice sessions and live performances.

There is a growing body of evidence that suggests that singing can have a positive impact on educational outcomes. A number of studies have shown that children who participate in singing activities perform better academically than those who do not (Ehrlin & Gustavsson, 2015). In addition, research has also shown that singing can help to improve social and emotional skills (Clarke et al., 2018). One of the main reasons why singing may have such a positive impact on educational outcomes is because it helps to develop language skills. Singing involves using expressive gestures and movements which can help children to understand and produce language more effectively. In addition, when children sing, they are often required to

think about the meaning of the words they are using, which can also help to aid language development.

Singing may also be beneficial for educational outcomes because it can help to improve concentration levels and memory recall. A number of studies have found that participating in regular singing activities leads to improved performance in tests requiring short-term memory recall and attention span tasks (Ehrlin & Gustavsson, 2015; Llari, 2013). This is likely due to the fact that singing requires focused attention and encourages the use of mnemonic strategies such as rhythm and rhyme. Participation in regular singing activities has also been linked with improved self-esteem, teamwork skills and cooperation (Stinson, 2021). These benefits are thought to result from the fact that singing teaches children how to express themselves creatively, and build relationships with others.

Challenges of applying singing theories, methodologies and concepts in primary schools

Whilst there is a wealth of research indicating that singing can be beneficial to students' development, it can be difficult to apply these findings in practice. This is because singing theories, methodologies and concepts vary significantly between schools. This makes it difficult to compare results across studies or to identify any clear trends (Stinson, 2021). Additionally, many primary schools have their own adapted curriculums or teaching styles, which may not be reflective of the general population. This makes it difficult to draw any conclusions about the potential benefits of singing for primary school children from studies conducted within this sector.

There does seem to be a lack of consensus on what constitutes 'good vocal technique' amongst voice professionals. Different teachers may have different ideas about what is important for students to learn in order to sing well. This can make it difficult for students to know which techniques they should be focusing on. Additionally, some teachers may not be familiar with the latest research on vocal technique and how it can be applied in the classroom. As a result, students may not be getting the most up-to-date and effective instruction possible (Chin & Rickard,

2014). Another potential challenge is that singing requires a high level of concentration and focus. If a student is not fully engaged in their lesson, they are likely to miss out on important information, or struggle to apply what they are learning. It can be difficult for primary school students to maintain this level of focus when they are also trying to keep up with their academics and extra-curricular activities (Pestana et al., 2017). Finally, many primary school students deal with performance anxiety when singing. This can prevent them from reaching their full potential as singers. It is important for teachers to create a supportive and safe environment in the classroom so that students feel comfortable taking risks and exploring their vocal abilities without fear of ridicule.

Ethical Considerations

My research explored the potential that singing in UK primary schools can have on learning (readiness to learn), emotional regulation and mental well-being. As a Prep school singing teacher with relevant experience in the industry, my aim was to produce a quality, robust and comprehensive review that would provide policymakers with evidence-based recommendations on the use of singing in primary schools. The first ethical consideration related to this review was ensuring that all included studies were of a high methodological quality. To do this I used a range of inclusion criteria when selecting studies for inclusion. These criteria ensured that only studies which met certain standards of quality were included in the final review. This helped to ensure that the results of the review were as accurate and reliable as possible.

Another key ethical consideration related to this systematic review was participant safety. All of the included studies were required to have received ethical approval from an appropriate ethics committee before data collection could commence. This helped to ensure that participants in the included studies were adequately protected from any risks associated with taking part. In addition, all the studies were examined to confirm that any information that was collected from participants would not be used in a way that would harm them. The final ethical consideration related to the systematic review was ensuring that any potential benefits of singing in primary

schools were taken into account. To do this, I used a range of inclusion and exclusion criteria when selecting studies for inclusion in the review. This helped to ensure that only studies which had reported positive effects of singing on learning, emotional regulation and mental well-being were included.

Conclusion

The findings of this systematic review suggest that singing in primary schools can have a positive impact on learning (readiness to learn), emotional regulation and mental well-being. There are a number of possible mechanisms by which singing could impact on learning, emotional regulation and mental well-being. Singing has been shown to improve breathing control and respiratory function, which could lead to improved concentration and focus within the classroom. Singing also activates both the left and right sides of the brain, providing an opportunity for whole brain learning. In terms of emotional regulation, singing has been shown to reduce stress levels and increase positive emotions such as joy and happiness. Finally, singing has been linked with increased self-esteem, social connectedness and resilience – all important factors in maintaining good mental health.

One recommendation for my future practice would be to continue to explore the potential impact of singing on children's learning and emotional regulation, through both research and practical application. This could involve working with other teachers and pupils to identify songs that are particularly helpful for promoting concentration or managing difficult emotions, and incorporating these into daily classroom routines or special assemblies. It may also be beneficial to provide opportunities for children to sing together outside of school, such as in after-school clubs or community choirs.

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