

Module BMPF7010 – Work Based Learning Project

Finding Their Voices: An action research project to assess the impact of specialist training and support for classroom teachers in promoting singing development in the Early Primary Years.

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Project Proposal
1. Project Title <i>Finding Their Voices</i> An action research project to assess the impact of training and supporting for classroom teachers in promoting singing development in the Early Primary Years.
2. The context a. What is the organisation/setting for the project? The project will be conducted through Music Generation Carlow (MGC), the researcher's employer, and will involve teaching staff recruited to the project from primary schools on MGC Performance Music Education programmes. b. What is the current (and, if relevant, historic) situation in this organisation and setting? The Music Generation Performance Music Education (PME) programme was established in 2010 and expanded throughout Ireland between 2011 and 2021. The programme operates through a devolved model of Local Music Education Partnerships (LMEPS) that are led by Education and Training Boards and Local Authorities, and each partnership develops performance music education programmes in response to local need and context (<i>Transforming Young Lives Through Music National Development Office Strategic Plan 2022</i>). Music Generation Carlow (MGC) has been in operation in this context since 2013. The programme provides community based instrumental and vocal tuition through the Hubs programme, and in-school, whole class Early Childhood music, Instrumental and Vocal PME through the Encore programme. Primary Schools in County Carlow apply annually to take part in the Encore programme. Musician Educators (MEs) work on a partnership basis with Classroom Teachers in delivering PME. The researcher is a Musician Educator delivering Early Childhood music and Vocal PME on the Encore programme.

3. The justification

a. Why are you undertaking this project?

The researcher's previous projects examined:

- a) Current research into how childhood singing development and how this can best be supported (Hayes, 2022).
- b) how the Irish primary school music curriculum treats childhood singing development and the guidance given to teachers in this regard (Hayes, 2023).

The researcher found that there is a lack of guidance for classroom teachers in Ireland in childhood singing development (Hayes, 2022). Research into the confidence of classroom teachers to undertake musical activity with their classes, and into perceptions of singing ability would suggest that many teachers feel a lack of confidence in this area (Hennessy, 2000; Demorest, Steven M., Kelley and Pfordresher, 2017).

The researcher proposes the provision to classroom teachers of training and guidance in childhood singing development in the early Primary Years (Junior Infants to 2nd Class) and ways that this can be supported in the classroom. This may assist teachers in feeling more confident to incorporate increased vocal activity in their classrooms and in using this to support the vocal development of their students. The researcher aims to test this theory through the provision of a pilot training and guidance programme, with associated action research around its effect on the classroom activity of the teachers involved.

b. How does this project sit within the context you have described?

The project is designed as a pilot project involving teachers in schools on MGC programmes, as a parallel and supportive activity to the work of MGC in schools through the Encore programme. The focus on vocal development in the early primary years is relevant to Music Generation as supporting the children to access their singing voices, and therefore help to form a positive musical self-image may be viewed as an important part of Music Generation's mission in schools (Flynn and Johnston, 2016).

In the MGC programmes, Musician Educators work with classes weekly for 45 minutes. More frequent vocal activity throughout the school day may have a

greater impact on children's singing development (Demorest, Steven, Nichols and Pfordresher, 2018). It is hoped that by empowering the classroom teacher to support children's vocal development, this will strengthen the partnership approach between Musician Educators and classroom teachers and enable the MEs to build further on this more holistic approach.

a. The intended impact

What do you hope to impact/achieve/accomplish through this project?

It is hoped that the training and guidance will have the following outcomes for the participating teachers:

- Gain greater understanding of Singing Development in the early Primary Years (Junior Infants to 2nd Class).
- Create confidence using methods explored in the training to support singing development in the classroom.
- Discover more ways to incorporate vocal activity throughout the school day which also benefit classroom management, wellbeing, and holistic learning.
- Build confidence in using their singing voices with their classes.
- Report successful and confident use of some of the approaches in their classrooms.
- Report increased singing and vocal exploration activity with their classes.
- Report increased awareness of the vocal development of their students.
- Report an awareness that this activity is of benefit and importance to their students.

It is hoped that the research project will indicate to what extent the participating teachers report positively in respect of the above outcomes, thereby indicating the effectiveness of the various aspects of the training and guidance provided and the overall potential of the approach for further development.

b. What might the wider ramifications of this project be to the context described?

The project may open pathways to an enhanced partnership model between schools, teachers and Music Generation activity by working directly with teachers to build their own musical confidence and creating dialogue and partnership between teachers and musician educators. This would in turn support teachers to invest fully in Music Generation activity and participate with their classes, thereby bringing the benefits into the school day and wider community. This model of enhancing partnership explores the possibilities of providing expert led training to classroom teachers in aspects of Performance Music Education. It may also lead to consideration of whether such a programme could be rolled out to other schools not currently on the programme as an alternate model of engagement and advocacy.

Outside Music Generation activities, if this initiative is successful, the researcher will explore whether it might be extended to teacher education services as part of teacher in-service training.

4. The outlined intention

- a. In brief, what do you intend to do, how/when/where do you intend to do it?

The project will involve:

- Recruitment of 3-10 participants through invitations to school principals involved in Music Generation Carlow programmes.
- Administration of a pre-project questionnaire for participants before a teacher training event. This will capture participants' existing knowledge and experience with singing and vocal development, both for their classes and themselves.
- Provision of a training event which gives participants practical experience, some background knowledge of childhood voice development and guidance documents to take back to school to aid implementation of the knowledge and activities learnt during the training.
- Administration of a post-training questionnaire at the end of this event to capture participant reactions to the training event and whether they feel it will aid them in the classroom.
- Provision of support to teachers by telephone or by video-conference as needed over a six-week implementation trial period.

- Use of review meetings / exit interviews at the end of the project to capture how far the training and guidance has resulted in the desired outcomes for the teachers and their classes.
- Collation and analysis of qualitative and quantitative data from the questionnaires and interviews.

b. Proposed methods, including a justification of those methods

The methodology for the project as a whole is that of action research, combining action and reflection with the intention of improving practice (Ebbutt (1985) referenced in Cohen, Manion and Morrison, 2003). Action research is characterised as being participatory (Cohen, Manion and Morrison, 2003), which aligns with the wish to work with the classroom teachers in considering the effectiveness of information and training on childhood voice development and consider with them how this can be implemented. The data gathering will take a mixed-methods approach (Morgan, 2007). This will include both quantitative evaluation, involving questionnaire sections seeking responses on Likert-type scales, and qualitative reflection, gathered through narrative questions in questionnaires and by interviews transcribed and hermeneutically analysed through a coding process.

c. An expected timeline

See GANNT chart timeline below.

5. The ethics and insider research

Ethical risks in the project arise around the possibility of participants being put in a vulnerable position regarding their levels of comfort with the activities in training, their own musical and singing background, how their musical self-image is impacted by the project and the effect on their professional activities in the classroom (Costley, Elliott and Gibbs, 2010). This project is not working directly with children or other vulnerable people so those risks are limited (Cohen, Manion and Morrison, 2003).

Ethical issues also arise around aspects of data gathering which are mitigated through an emphasis on voluntary participation, anonymous data gathering and presentation (Costley, Elliott and Gibbs, 2010). All data will be recorded and reported on an anonymous basis. Any personal data regarding participants will be recorded with the participants full knowledge and consent, and deleted once the

research is completed. The research project has received ethical approval from the University of Wales Trinity Saint David.

Issues of insider research may impact primarily on the relationship between Music Generation Carlow and the schools and teachers which participate in MGC programme. The impact the research may have on working relationships is one aspect, also the implications that the research may have for the approach to working with schools in Music Generation Carlow and more widely. The researcher must carefully link the research goals with MGC goals, while ensuring that direction of research and training supports rather than undermines the activities of MGC in schools.

If the training is not effective and or well received, or the participants have difficulties with the research aspect, there is a reputational risk to the researcher and to MGC, and the risk of difficulties working with teachers who may be working with the researcher or other Musician Educators in the future.

6. Personal learning outcomes

The researcher hopes to achieve:

- Greater understanding of approaches to presenting research-based methodology in an effective manner to a practitioner group.
- Experience in working with classroom teachers in considering how they can incorporate aspects of vocal pedagogy into their classrooms.
- Insight into whether the researcher's approach to this issue resonates with classroom teachers and understanding of their response.
- A perspective as to whether this approach could be effectively implemented more widely in the primary teaching sphere.

Figure 1 Initial GANNT Timeline

	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Task / Week beg	2023	2023	2023	2023	2023	2023	2024	2024	2024
Project Proposal									
Literature search, review and analysis									
Participant recruitment									
Guidance documents and training course design									
Questionnaire / Interview design									
Pre-training questionnaire implement									
Training course implementation									
Post training questionnaire implement									
Training implementation period in classrooms									
Review meeting(s)									
Data collation and analysis									
Tutorial									
Project Report write up									
Presentation draft									
Redraft and submit									
Project Presentation									

Project Report

1. Introduction

The voice is the fundamental instrument with which each human being is born and uses to express themselves, “one of the defining features of humanity” (Welch, 2005 p.239). In modern society, singing is viewed as a talent or skill which some have and others do not (Welch, 2015). Singing skill or talent is defined through the ability to sing specific pitches, to sing with a group at the same pitch, and to sing with a particular tone and timbre that is deemed appropriate for the type of singing involved. These aspects are learnt skills and have aspects in common with language acquisition (Chen-Hafteck, 1997).

The level of singing skill of an individual has long been seen as a marker of musical ability (McAuliffe, 2004; Welch, 2015), and adults who feel they have no singing ability will often see themselves as unmusical (Pfordresher and Demorest, 2021).

The researcher’s principal practice is through Music Generation Ireland, which seeks to give as many young people as possible the opportunity to be musical and to explore their “Possible Selves in Music” (Flynn and Johnston, 2016, title). The focus of the researcher’s pedagogy is on musical expression through the voice with young people from early childhood through to adolescence.

The researcher often works on a whole-class basis with primary school classes. This involves a partnership approach with classroom teachers. The researcher is aware of the risks that specialist music education in schools can disenfranchise classroom teachers in their role of teaching the music curriculum (O’Flynn *et al.*, 2022). The researcher seeks ways in which classroom teachers can be empowered to embed musical activity, particularly singing, in their classroom routines and thereby support both curriculum activities and those of specialist educators.

The ways in which children and young people can be supported in their vocal development to become capable singers are central considerations in providing all children with the possibility of a musical identity. Those who have negative singing experiences in childhood can form internal representations of themselves as non-singers. This is associated with a self-image of being a non-musician (Welch, 2005). It is therefore crucial to lay the foundations for positive singing experiences in childhood with a view to fostering a musical identity (Welch, 2017).

Welch (2015) argues that the number of people who count themselves as singing ‘failures’ would be drastically reduced if there were greater awareness of a) how singing skill is

acquired, b) how children of similar ages can be at different stages of development, and c) what singing activities are suitable for children of different stages and how to support their development. (Welch, 2015).

One of the principal settings for childhood learning and development is the primary school. The Irish primary school music curriculum sees singing as a fundamental part of musical activity (*Music Primary School Curriculum* 1999) but the researcher has found that there is a lack of guidance for classroom teachers in Ireland in childhood singing development, and the curriculum assumes the development of competency rather than discussing ways in which this can be supported (Hayes, 2023).

If singing is to be fully supported as a natural behaviour that is interchangeable with speaking, research suggests that varied singing activities should be integrated into the school day and not seen as a discrete activity (Chen-Hafteck, 1997). As the generalist classroom teacher leads day to day activity in the classroom, this responsibility would fall on them.

The researcher proposes the provision of specialist training and support regarding childhood singing development in the early Primary Years (Junior Infants to 2nd Class) and ways that this can be promoted in the classroom. It is envisaged that this may assist teachers in feeling more confident in integrating vocal activity in their classrooms and in using this to support the vocal development of their students.

This project aims to test this theory through the provision of a pilot training and support programme, with associated action research around its effect on the classroom activity and the musical confidence of the teachers involved.

The aims of the project are that the teachers:

- Gain greater understanding of Singing Development in the early Primary Years (Junior Infants to 2nd Class).
- Feel confident using methods explored in the training to support singing development in the classroom.
- Discover more ways to incorporate vocal activity throughout the school day which also benefit classroom management, wellbeing, and holistic learning.
- Build confidence in using their singing voices with their classes.
- Report successful and confident use of some of the approaches in their classrooms.
- Report increased singing and vocal exploration activity with their classes.

- Report increased awareness of the vocal development of their students.
- Report an awareness that this activity is of benefit and importance to their students.

The research questions arising from the project are:

1. How effective is the provision of a training and guidance programme for classroom teachers in achieving the project aims?
2. What circumstances affect the ability of the classroom teachers to successfully implement the approach to classroom vocal activity?
3. What recommendations for the further development of the training and guidance programme can be made arising from the project?

The researcher envisages that arising from this pilot project, a programme could be developed for implementation in primary schools across Ireland, linked to the Music Generation programme or to other music education initiatives promoting singing.

Learning outcomes for the researcher include:

- An understanding of how much background information is useful for the classroom teacher to successfully implement the approach.
- Experience in making research into childhood vocal development relevant and comprehensible to the classroom teacher who may have a limited musical knowledge.
- Experience in ways to help generalist classroom teachers gain confidence in their singing and musical abilities in order to support their own classes.

2. Literature Review

2.1 Research into childhood vocal development

There is a large body of research into childhood vocal development and singing. One major thematic area is the arc of voice development in the child and the vocal behaviours infants and children exhibit at different stages of maturation. When children enter formal education, this research focuses largely on the development of singing skill.

This concept of skill is informed by the dominant (Western) singing culture of the researchers, and is based on musical concepts such as pitch, rhythm, phrasing and tonality (Welch, 1994). The primary focus is on pitch and how vocal behaviour develops to a stage where a child can sing 'in tune' with other singers (Welch, 1994), to reproduce sounds produced by other voices at the same pitch, and to sing known melodies recognisably and with consistent pitch and tonality (Nichols, Hua and Wang, 2022).

Significant contributions have been made to research in this area by two eminent music education and voice researchers, who have developed approaches to measuring voice use and vocal skill in children. Joanne Rutkowski (US) developed a measurement tool based on how a child's voice develops in terms of use of range and register (Rutkowski, 2019; Rutkowski, 2015; Rutkowski and Miller, 2003; Rutkowski and Snell Miller, 2002). Graham Welch (UK) examined accuracy of pitch production on a developmental scale (Welch, 1986; Welch, 1998).

The principal finding of this research area is that the development of singing skill happens at varying rates throughout childhood. Children in one class or age group may be at different stages, but by the age of 11, only a minority will be considered as singing 'out of tune' (Welch, 2015). Rutkowski and Miller (2003) reported significant gains in singing development after first grade (c. 7 years). Svec (2018) in a review of research found that singing accuracy improves the most between the ages of five and eight and concluded that children of those ages will benefit from a singing programme that focuses on vocal development, rather than being limited to group singing instruction (Svec, 2018). Rutkowski (2015) found that children who can access a wider range and different registers in their voices may be more accurate in pitch.

2.2 Research into the effects of singing pedagogy

A second large body of research exists on the effects of different pedagogical approaches to singing activity and instruction on the singing skill of children. There are many variables to the circumstances and approaches to instruction for singing and vocal development in children, and this is reflected in the number of research studies. The consistency of approach and purpose for each study is varied, and the difficulty of getting definitive

outcomes from previous research is frequently discussed (Pfordresher and Demorest, 2021; Svec, 2018; Demorest, Steven M. and Pfordresher, 2015).

Welch (2015) in a review of research concluded that “it is likely that singing competency will be nurtured through exposure to frequent opportunities for vocal play within an environment that encourages vocal exploration and accurate imitation” (Welch, 2015 p.448).

The nature of ‘frequent opportunities’ is illustrated by Demorest et al (2018), who found that children benefited most from daily singing instruction and that this approach may accelerate the development of singing accuracy.

Welch (2015) also concluded that where singing development is fostered, children will be able to engage in vocal play and exploration, singing games both with peers and experienced singers, and have opportunities to improvise and compose their own songs. The importance of vocal exploration is that it encourages children to experiment with different sounds and timbres in the voice, thus accessing a greater vocal range. Rutkowski (2015) found that children who can access a greater range of voice have better pitching ability (Rutkowski, 2015). As poor pitch singing is viewed as a sensorimotor co-ordination deficit (Pfordresher and Brown, 2007), then practice in using the voice in different ranges may develop these responses. Vocal play can be seen as the continuation of early vocalisation patterns in infants and in the ways in which adults speak to infants (Welch, 2005). This infant pattern of exploring pitch control and melodic contour in the voice before the development of speech mirrors the use of vocal exploration in supporting singing, before being able to consistently fuse words with pitch in the singing of songs.

Children’s singing accuracy and skill development can depend on the task involved (Welch, 2015). Hence, singing development in children is best supported by providing a mix of singing tasks and opportunities. Task variables include the imitation of short patterns and individual pitches (Hedden, 2012) and the performance of known or unknown songs with or without words (Nichols, 2016). It is important that the task or repertoire is matched to the abilities of the children (Hedden, 2012). Many studies recommend a mix of solo and small group activities (Goetze and Horii, 1989; Levinowitz, 1987), and learning songs with and without words (Levinowitz, 1987). Svec’s (2018) review confirms that singing instruction which incorporates a mix of approaches is more effective than just song-singing alone.

Chen-Haftek (1997) found that music and language development in early childhood can and should be closely related in education, and learning is enhanced when children develop both. Singing improvisation can allow children to explore language imaginatively in ways they may not try in speech (Chen-Hafteck, 1997). However, where language is reinforced

more than music, the latter gradually lags behind and this opportunity is lost. Chen-Haftek (1997) demonstrates this by referencing the research of Kalmar (1991), where a group of Hungarian children were seen to have more facility than a group of Australian children in improvising spontaneous songs. The Hungarian children used speaking and singing more interchangeably than the Australian children, who differentiated clearly between the two behaviours, and for whom singing may not have seemed as natural (Chen-Haftek, 1997). The embedding of singing and vocal exploration with other learning behaviours is therefore part of the approach of this project to support singing development in a way that it remains as natural a behaviour to the children as speaking.

2.3 Research into effects of singing activity

A third area of research into singing in childhood focuses on the effects of singing activity on non-musical aspects of children's lives. Welch (2017) describes positive effects in areas including physical (respiratory, cardiac, fine and gross motor control in the vocal system, neurological development), and psychological (intra- and interpersonal communication and identity), social inclusion and educational areas. Studies related to the UK programme *SingUp* found that children who had taken part, or who had a more positive singer identity irrespective of *SingUp* experience, demonstrated a greater sense of social inclusion and positive self-concept, both musical and general (Welch, *et al.*, 2014; Papageorgi *et al.*, 2022). Reports from schools in similar programmes such as Voices Foundation and Out of the Ark also highlight increases in confidence, well-being and self-esteem, and also in pupil learning and attainment (Hallam, 2019; Voices Foundation, 2021).

2.4 Classroom singing and the generalist teacher

The subject of research into childhood singing development is in the largest part the experiences and behaviours of the children themselves. The greater proportion of the literature also involves singing activities led by music specialists in sessions, either curricular or extra-curricular, specifically devoted to music and singing.

In the Irish primary school system, the classroom generalist teacher has the responsibility for teaching the music curriculum and there is no formal system incorporating music specialists in either a curriculum teaching or training role (Finnerty, 2011; O'Callaghan, 2003). There has been considerable debate over the years about the merits of the musical specialist over the classroom teacher, and there is a growing body of research on the experience of the classroom generalist in teaching music, as this practice becomes more widespread (de Vries, 2015). Reliance on a music specialist can reinforce ideas that music is only for those with considerable training and discourage the generalist from any musical activity as they are not 'trained musicians' (McAuliffe, 2004) and may risk replacing a more holistic

curriculum-based music education (O'Flynn *et al.*, 2022). Others have argued that curriculum areas such as creative writing, or art, are not taught by specialists and that the principal issue for classroom teachers should not be seen as lack of musical skills but as lack of self-confidence in their musical abilities (McAuliffe, 2004; O'Callaghan, 2003).

A recurring theme relating to the generalist teacher and music education is that of musical self-confidence (Russell-Bowie, 2009; Hennessy, 2000; Hogan, 2021; de Vries, 2015). Kenny (2017) emphasised the importance of practical and creative experience in Initial Teacher Education and noted that engagement in music as a subject can rely on confidence and experience (Kenny, 2017).

Research looking specifically at the role of the classroom generalist teacher in singing activity in the classroom is rarer. Horwitz *et al* (2023) examined how singing activities can be incorporated into the school day using focus group interviews with primary school music teachers. This study was done with music specialists and not generalists and the findings and recommendations tended to focus on activity specifically related to music teaching and song-learning. Themes identified such as the importance of routines and familiarity; use of different approaches and activities; issues of singing confidence in students and teachers; and synergies with other learning activities are however areas which also have resonance in the classroom generalist experience.

Over the last two decades in the UK, a number of organisations such as SingUp, Voices Foundation, and Out of the Ark have worked in schools to develop a 'singing school' approach, involving the classroom teachers in implementing a singing programme, and reported on the effect of these on the singing and non-singing experiences of the children (Rogers *et al.*, 2008; Welch *et al.*, 2011; Hallam, 2019). These programmes all involve training for classroom teachers, and part of the approach of all three is to integrate singing into classroom activity through the music curriculum, cross-curricular activity and non-curricular activity such as management and transitions. The crucial role of the classroom teacher is illustrated through the evaluation of the SingUp programme in the UK. Singing improvement was seen across schools in the programme from varied socio-economic and academic backgrounds. It was particularly noted that "Progress was most marked where the class teacher expected and worked consistently for singing improvement with all their pupils over a sustained period" (Welch, 2015 p.447).

Australia also has a generalist-led primary music curriculum. Barrett *et al.* (2020) reported on the impact of an intervention designed to support classroom generalists in singing activities in early childhood classes. The report stated that classroom teachers received training and mentoring from music specialists to "develop lesson plans and music activities

that utilized existing resources and were integrated into the daily program of the class, often occurring during transitions between lessons” (Barrett *et al.*, 2020 p.123). The research question for this study was the effect on the children’s singing and their attitudes towards music and the findings in this area were positive. This study demonstrates further the positive effects of this approach for the children but does not study the specific experience of the classroom teacher.

The benefits for children of regular, integrated and spontaneous singing in schools have been well documented. The researcher suggests that barriers to the implementation of singing approaches which have proven to be beneficial may exist in the understanding and confidence of classroom teachers in how these approaches can be employed. This is supported by literature which documents issues of confidence in teaching music and singing with their classes for classroom generalist teachers.

The development of a training module for teachers needs to be based on sound practice supported by research. The researcher has found no published reports on similar projects which focus on the in-service training of classroom teachers in general cross-curricular singing activity and the experience of the teachers themselves. Hence this literature review demonstrates the research basis for a) the pedagogical foundations of the training and support module developed by the researcher and b) the argument for an action research approach which focuses on a collaborative pathway to developing the classroom teachers’ practise and the effectiveness thereof.

3. Methodology

3.1 Research Paradigm

The ontological position for this research project is relativist, using human experience to seek truths that are to be found in different perspectives and experiences, noting that there is no single answer or formula to be found (Easterby-Smith *et al.*, 2018).

The epistemological framework of the project uses a social constructivist, but essentially pragmatic paradigm (Morgan, 2007). A key aspect of social constructivism is that the researcher is part of what is being observed (Easterby-Smith *et al.*, 2018). Here, the researcher has developed a theory that a specific approach to supporting singing development in the classroom could be of assistance to classroom teachers and has designed a training module and provided this to the other research participants, the classroom teachers, through an action research methodology. Hence the researcher's theories and actions are part of what is being observed, and the aim is to increase the general understanding of the effectiveness of the approach and the issues that arise, through the gathering of data from complex situations and with stakeholder perspectives (Easterby-Smith *et al.*, 2018). The pragmatic paradigm as described by Morgan (2007) employs a mixed-methods approach whereby both quantitative and qualitative methodologies are applied to best address the research question at hand.

The principal methodology for the project is that of action research, using a mixed-methods approach. Action research is participatory and combines action and reflection with the intention of improving practice (Cohen, Manion and Morrison, 2003). The researcher collaborated with the classroom teachers in designing the project, delivering the training to the teachers and participating with them in the reflective interview which considered the effectiveness of the information and training on childhood voice development and the impact in their classrooms. The teachers participated in the project by taking part in the training and attempting to implement the approach in their classrooms, with the aim of assessing whether this enabled an improvement in their practice and in the experiences of the students.

The data gathering in this regard includes both quantitative evaluation, and qualitative reflection, gathered through narrative questions in questionnaires and by reflective interview, the qualitative data from which was hermeneutically analysed through a coding process. A case study approach is also applied in analysing the data qualitatively, by considering the different experiences of the three teachers involved. Due to the small number of participants on the project, the quantitative aspect of the data is lessened as there are insufficient data sources with which to make any statistical comparisons.

3.2 Ethics and Insider Research

Ethical approval for the project was received from the University of Wales Trinity Saint David (see Appendix I). The ethical considerations of the research involved consideration of the relationship between the researcher and the participants (Costley, Elliott and Gibbs, 2010). As the project did not involve working directly with children or other vulnerable people, those risks were limited. However, it was important to practice an 'ethic of care' (Costley, Elliott and Gibbs, 2010 p.43) for the participants. This involves being alert to the possibility of participants being put in vulnerable positions regarding their levels of comfort with the activities in training, their own musical and singing background, and how their musical self-image may be impacted by the project (Demorest and Pfordresher, 2015).

The ethical issues surrounding research data gathering were mitigated through an emphasis on voluntary participation, anonymous data gathering and presentation. Participation in the project was wholly voluntary, and it was made clear that participation in the research aspects was also voluntary. All data were recorded and reported on an anonymous basis, the school involved was not identified and the teachers were referred to only as Teacher 1, Teacher 2 and Teacher 3, using neutral pronouns to make the reporting fully anonymous. Any personal data held by the researcher regarding participants is held with the participants full knowledge and consent and will be deleted once the research is completed.

Issues of insider research had an impact on the project in an unexpected way. It was originally envisaged that the schools and teachers which take part in the Music Generation Carlow (MGC) programme would be invited to take part in the project. In this scenario, considerations included the impact that research may have on the working relationships with the schools in the programme and the implications that the research may have for the approach to working with schools in MGC and more widely. The researcher had to carefully link the research goals with MGC goals, while ensuring that the direction of research and training supports rather than undermines the activities of MGC in schools.

However, when recruiting for the project, the schools in the MGC were not in a position to participate. Due to changes in the schools with which the researcher was involved in the lead up to the project, at the time of participant recruitment the researcher did not have a relationship built up with any school in the programme who may have been able to take part, thereby making the recruitment process more difficult. Issues of the timing of the recruitment process during the summer vacation also arose. Eventually the researcher found participants in a school not linked to MGC with which the researcher had an independent relationship. The researcher retained a responsibility to MGC to ensure that the research

did not risk any reputational impact on MGC, as it was made clear that this was the researcher's practice area and employer. The responsibility to ensure that the project was specifically supportive to MGC activity in the participating school and to measure this as an outcome was however lifted. Nevertheless, it remains an aim of the researcher that this pilot project could be developed into a programme that could be implemented through Music Generation or through other organisations that support singing in schools.

3.3 Project Timeline and Methods

Following confirmation of ethical approval, recruitment of participants commenced in July 2023. However, as discussed above, recruitment of participants in the project was not achieved until January 2024, when three participants were confirmed who were classroom teachers in a school with which the researcher had an existing relationship separate to the MGC programme. A meeting was held with the prospective participants in late January 2024 at which the researcher outlined the aims and format of the project, and the voluntary nature of the research participation.

3.3.1 Pre-workshop questionnaire

During early February 2024, the participants completed a pre-workshop questionnaire (see Appendix III), which was administered using Google Forms. This used a combination of multiple-choice questions, Likert-scale type questions and narrative questions to gain quantitative and qualitative data in the following areas:

- the musical background, experiences and confidence levels of the participants.
- the participants training in music education.
- the participants expectations of the value of aspects the training session for them.
- the participants existing understanding of childhood vocal development.
- existing levels of singing activity, confidence and skill in the participants' classes.

The responses to the pre-workshop questionnaire were used to inform the design of the workshop by having some information on the musical background and current activity of the participants and their classes, and also to provide baseline data to compare to post-project data.

3.3.2 Training Workshop

The training workshop took place in late February 2024. This consisted of a 1.5-hour session in which the researcher presented some research-based information regarding singing development in children and the benefits of integrating singing and vocal exploration in classroom activities. Through practical experience led by the researcher, the participants were introduced to some approaches and resources that could be used in implementing this

integrated vocal approach in their classrooms. The PowerPoint slides for the workshop are included as Appendix IV.

3.3.3 Post-workshop questionnaire.

The participants were invited to complete the second questionnaire of the project directly after the participants had taken part in the training workshop, to collect data on how effective they felt the workshop content and delivery had been (see Appendix V), and on how they assessed their readiness and confidence in implementing the approach in the classroom. This was also administered online through Google forms and used multiple choice questions, Likert-type scales and narrative questions to gather a combination of quantitative and qualitative data.

3.3.4 Workshop follow-up and implementation period

The researcher provided the participants with resources as a follow-up to the workshop and invited them to keep in touch through email with any questions or requests that might arise. The implementation period for the project encompassed March, April and May of the school year. During May, the researcher contacted the participants again to set up a post-implementation interview and to invite them to complete a third questionnaire.

3.3.5 Post-implementation interview and questionnaire

The post-implementation interview took place in mid-June 2024, through a thirty-minute online group discussion which was recorded with the consent of the participants. The interview was conducted with all participants at once in a group setting. This was the preference of the participants, as it suited their time constraints. It also however provided potentially richer data as the responses from the participants prompted reflection from each other, rather than being directed solely by the researcher.

The post-implementation questionnaire (see Appendix VI) mirrored or repeated the sections and questions of the pre-workshop questionnaire, to obtain comparative data which could indicate the impact and success of the project.

3.3.6 Analysis of questionnaire data

The questionnaire data responses were directly compared and reported narratively. As there were only three participants the reporting of the quantitative aspects is done narratively or by way of illustrative tables. There was a small number of narrative responses in the questionnaires, and these were not coded but used to reflect or qualify the quantitative responses in the data, and to contribute to case study data.

3.3.7 Group Interview

The group interview took the form of a thirty-minute zoom conversation between the researcher and the three participants which occurred in mid-June, after an implementation period of three months.

The researcher guided the discussion through asking five prompt questions during the interview, which were:

1. How the group had been able to implement the training?
2. How confident they felt to continue the approach and what aspects they might do differently?
3. What barriers to the approach could they identify for teachers and students?
4. How had the project affected their thinking about wider issues of music and singing in schools?
5. How they viewed the approach of incorporating singing activity throughout the school day?

The recording of the interview was transcribed and coded for qualitative analysis (see Appendix VIII). As the data from the questionnaires and the group discussion were assembled and analysed, it became apparent that the three participants reported markedly different experiences with the project. It was therefore of value to report the outcome of the project in terms of the experience of each of the participants. The participants were for this reason labelled Teacher 1, Teacher 2 and Teacher 3, while keeping the data anonymous.

In developing a coding methodology, the researcher took inspiration from Quinn-Patton's (2015) principle that each analytical approach used for qualitative data will be unique, because each study is unique, and Saldaña (2016), who encourages the researcher to "develop not only your own coding methods as needed, but even your own data analytic processes" (Saldaña, 2016 p.117)

The coding scheme is presented in a chart as Appendix VII. Two sets of codes were used simultaneously (Saldaña, 2016):

1. Deductive evaluation codes developed from the intended outcomes of the project as outlined in the Project Proposal (see page 3). Magnitude codes (Saldaña, 2016) were applied to these deductive codes on a five-point scale from Very Negative to Very Positive. These were used to identify evaluative statements that give insight into how well the project aims were achieved.

2. Inductive concept codes (Saldaña, 2016) were developed from the text, to identify themes and issues which can be drawn from the teachers' experiences with the project.

Following coding, four categories were developed from the codes, the research questions and the discussion questions. All the codes were ascribed to one of these categories. The assignments of codes to categories are shown on Appendix VII through colour coding. The categories and their colours are shown here in Figure 2.

Figure 2 Coding categories

Categories
A Indicators of success of project implementation
B Indicators of future Impact of project
C Indicators of barriers and issues in implementation
D Wider music curriculum issues.

The coded qualitative data was also analysed by code frequency, as can be useful in a mixed methods study (Saldaña, 2016), to identify recurrent concepts. In the Analysis and Discussion section below, the data is considered according to category, and also according to case studies of individual teachers, as it became apparent that each participant had a different and specific experience of the project that would be instructive in the consideration of the research data. The participant case studies are used to illustrate the varied contributory factors to the success or otherwise of aspects of the project.

4. Data Analysis and Discussion

4.1 Pre-workshop and post-implementation questionnaire findings

The questionnaires were structured into five sections. The post-implementation questionnaire mirrored or repeated the sections and questions of the pre-workshop questionnaire. Where direct comparisons are possible, composite tables show the relevant answers from both questionnaires for comparison.

4.1.1 Section 1: You as a Musician

The first section of the pre-workshop questionnaire sought information on the musical background, experiences and confidence levels of the participants.

Figure 3 Pre-workshop questionnaire – What is your musical background?

Pre-workshop questionnaire What is your own musical background?			
Sing in a choir or other vocal group			
Can read music			
Used to sing in a choir or other vocal group			
Used to play an instrument			
Sing in the car / at home / in the shower			
	Teacher 1	Teacher 2	Teacher 3

In the pre-workshop questionnaire participants were asked to describe their musical memories from Primary and Secondary school. Teachers 1 and 3 reported positive musical experiences from both Primary and Secondary school. These teachers also reported greater confidence in their own musical ability. Teacher 2, who reports a lack of musical confidence, reported some positive memories from Primary school, but their memories of music at Secondary level are that *'the musical kids chose music and I chose something else'*. Hennessy (2000) suggests that the experience of musical learning which is then given up after a few years may lead students to a belief in their musical inadequacy in this way, that those who carry on are more musical.

Figure 4 How musical do you consider yourself to be?

Pre-workshop questionnaire How musical do you consider yourself to be?				
1. Not at all musical	2	3	4	5 Very Musical
				4
	3			4
	3			4
	3	1		4
Teacher 1	Teacher 2		Teacher 3	

Figure 5 Change in confidence in musical ability

Post-implementation questionnaire Has your confidence in your own musical ability changed as a result of this project?		
1 Disimproved	2 The same	3 Improved
3	2	3
Teacher 1	Teacher 2	Teacher 3

The participants were asked to give Likert-style scores to their confidence levels singing with or in front of other adults, and with or in front of children, both pre-workshop and post-implementation.

Figure 6 How do you feel about singing...?

How do you feel about singing..									
1. Not at all confident		2		3		4		5. Very confident	
With adults	5	4	2	4	5	5			
In front of adults	4	3	1	3	4	3			
With children	5	5	4	5	5	5			
In front of children	4	4	3	4	5	4			
	Pre	Post	Pre	Post	Pre	Post			
	Teacher 1		Teacher 2		Teacher 3				

The pre-workshop scores are reflective of their reported musical confidence in the earlier questions, with Teachers 1 and 3 scoring their confidence levels generally higher than teacher 2. It is also noticeable that teachers feel more confident singing with children in a teacher role than singing with and in front of other adults.

For the post-implementation questionnaire, the participants were not provided with their previous answers to these questions, although they could have referred to the previous link as it was still open. Teacher 1 and teacher 3, who reported increased confidence in their musical ability, rated their singing confidence however slightly lower than they had initially around singing in front of other adults. Whether this can be given any significance is unclear. Teacher 2 reported no change in their musical self-image but did rate more highly than initially their confidence in singing with / in front of adults and children. The risks that working with specialists may lessen a generalist's impressions of their own ability have been noted by Hennessy (2000), who also noted the issues of confidence that may arise when training is undertaken (in the research by student teachers) but there is a lack of support in the classroom. However, this pattern is not reflected by Teacher 2 and it seems that the less confident teacher may have built more confidence through having just done the training and explored this area, which reflects the importance of experiential training and the positive effects of simply giving attention to an activity (Kenny, 2017; Hennessy, 2000).

4.1.2 Section 2: Training in Music Education

The second section of the pre-workshop questionnaire sought data regarding the participants' training in music education. Teachers 1 and 3 reported similar amounts of music education in their Initial Teacher Education courses, equivalent to 20 hours over one or two years of a Teacher Education degree. Teacher 2 recalled a greater amount of time

spent on music education, implying around 20 hours per year of a three-year degree. The participants reported little by way of in-service training; Teacher 3 had done some training for an online music curriculum service but Teachers 1 and 2 reported no in-service music education training.

The post-implementation questionnaire asked the participants' opinions regarding the usefulness of this knowledge to teachers and when training would be useful.

All participants expressed the opinion that knowledge about childhood vocal development is useful or very useful to teachers. The participants all suggest that training in this area would be useful in Initial Teacher Education and as Continuing Professional Development, with Teacher 1 also indicating that specific training in early career would be helpful. All participants express a positive wish for further training for themselves in this area.

4.1.3 Section 3: How valuable do you think the various aspects of this training will be to you?

Figure 7 Value of training to teacher

How valuable do you think the various aspects of this training will be to you / in the future						
1. Not very valuable		2	3	4	5. Very Valuable	
Learning about childhood vocal development	4	3	5	4	5	4
	4	4	5	4	5	4
Learning about vocal exploration activities	4	4	5	4	5	4
	5	5	5	5	5	4
Learning about using singing and vocal exploration for task based and classroom management activities	4	4	5	4	5	4
	4	4	5	4	5	4
Improving your own vocal confidence	4	4	5	4	5	4
	4	4	5	4	5	4
	Pre	Post	Pre	Post	Pre	Post
	Teacher 1		Teacher 2		Teacher 3	

Pre-project, all participants reported high expectations for how useful these aspects would be, though given their voluntary participation in the project this might not be seen as

surprising. The participants were asked about any specific aspect they wished to comment on or ask about, and Teacher 1 responded *"I am hoping to use this training to help with classroom management as my class are very busy"*.

Only Teacher 1 expressed a neutral view following the project as to the value of the information on childhood vocal development. This is noteworthy in the context of Teacher 1 being the only teacher who reported success in implementing aspects of the approach to singing activities from the workshop in their classes.

Teacher 2 and Teacher 3 assessed the future value of the knowledge slightly lower post project than pre-project. This could be interpreted as a more informed view post-project, compared to an optimistic wish to be supportive. While these responses remain positive, the slight drop in positivity may indicate the need for more activity and training to make a stronger impact.

Post-implementation, participants were asked for their comments on how they applied or referred to specific aspects of the training. Teacher 1 focused on *'I have loved adding common tunes to classroom management activities'*, an example of a successful method of incorporating singing activities into the day. Teacher 3 responded

"I really feel that the training I received would be useful especially at a younger age. I didn't get to try it with my class this year as I was doing a lot of training for [special educational needs class]... next year. ... I will have younger children so I am hoping to use what I have learned while also being mindful that it may not suit the children in my class."

This response is interesting as while the teacher was unable to apply the training directly to their own class situation due to the pressure of other commitments, there is some reflection on how this training would be useful for all teachers and when the training might be most effectively undertaken, alongside reflection on other classroom situations where it may be useful.

4.1.4 Section 4: Current knowledge of this area

Figure 8 Knowledge pre-workshop

Pre-workshop Section 4: What is your level of knowledge about childhood vocal development?				
1. No knowledge	2	3	4	5. Good understanding
				3
	2	2		3
	2	2		3
Teacher 1	Teacher 2		Teacher 3	

Figure 9 Change in knowledge level

Post-implementation Section 4 How do you feel your knowledge of this area has changed through the project?			
1. Disimproved	2 Stayed the same	3. Improved somewhat	4. Improved a lot
	3	3	3
	3	3	3
	3	3	3
Teacher 1	Teacher 2		Teacher 3

Pre-workshop, all participants gave a low self-assessment score of their own knowledge.

Teacher 1 commented *“I know children start singing and responding to soh-mi from a young age but I am unsure of anything else”*, and Teacher 2 *“I understand that children begin their vocal development very early on through making sounds and babbling, etc.”*

Post-implementation, all participants reported that they felt their knowledge of the area of childhood vocal development had improved somewhat through participation in the project. Their narrative responses regarding particularly beneficial or relevant information for them focused on practical uses for the approach rather than childhood vocal development.

Teacher 1: *“How singing can be easily integrated into the day and other subjects.”*

Teacher 2: *“Incorporating singing into everyday routines has many benefits for children of all ages.”*

Teacher 3: “Using singing as a means of classroom management – I really want to try this out”

4.1.5 Section 5: Singing in your classroom

The last section of the questionnaires sought to gauge the pre- and post-implementation levels of singing activity, confidence and skill in the participants' classes.

A clear increase in singing activity was reported by Teacher 1, who was able to implement the approach successfully with their class. The other two teachers did not report an increase in singing activity.

Figure 10 How much singing activity with your class?

How much singing or vocal exploration do you do with your class on a day-to-day basis?					
1. Rarely sing	2 Sing less than once a week	3 Sing around once a week	4 Sing some days of the week	5. Sing something every day	
Pre	Post	Pre	Post	Pre	Post
Teacher 1		Teacher 2		Teacher 3	
Senior Infants / 1st class (6-7yrs)		5th Class (11 yrs)		2nd class (8 yrs)	

Figure 11 Proportion of confident singers

What proportion of the children in your class do you feel are confident singers?					
1. Few confident	2 Some	3 Most	4 All	5 All very confident	
Pre	Post	Pre	Post	Pre	Post
Teacher 1		Teacher 2		Teacher 3	
Senior Infants / 1st class (6-7yrs)		5th Class (11 yrs)		2nd class (8 yrs)	

Figure 12 Use of singing voices

What proportion of children in your class do you feel can use their singing voices and sing in-tune?									
1. None		2 Around 1/4		3 Around ½		4. Around ¾		5 All of them	
Pre	Post			Pre	Post			Pre	Post
Teacher 1				Teacher 2				Teacher 3	
Senior Infants / 1st class (6-7yrs)				5th Class (11 yrs)				2nd class (8 yrs)	

Figure 13 Class and teacher enjoyment and value

How much.....									
1 Least		2		3		4		5 Most	
... do the children in your class enjoy singing?		4	4	5	5	4	4		
....do you enjoy singing with your class?		5	5	5	5	4	5		
.....do you feel that singing and vocal exploration is beneficial to children?		4	4	5	5	4	5		
		Pre	Post	Pre	Post	Pre	Post		
		Teacher 1		Teacher 2		Teacher 3			
		Sen. Inf./1st class (6-7yrs)		5th Class (11 yrs)		2nd class (8 yrs)			

All participants had reported that their classes already showed a high level of enjoyment of singing activities. It is relevant here that it is the oldest class who are already reported to be mostly confident singers who really enjoy the activity. A good level of vocal facility would be largely expected at this stage of childhood where children have done regular singing (Welch, 2015).

Teacher 1, who had implemented the approach, reported a clear increase in singing confidence and skill with their class. Teacher 3 also reported an increase in confidence and skill even though implementation was not reported. This could be natural improvement or subjective and cannot be easily verified. Teacher 2 of the older class reported the same levels of activity and the same high levels of enjoyment and skill.

The final question invited reflections about the benefits of singing to the participants' classes, both pre-workshop and how the teachers viewed this post-implementation.

Pre-workshop, Teachers 1 and 2 responded to this question and gave positive responses, with Teacher 1 focusing on the specific educational benefits and student wellbeing. *"Helps to focus children. Helps them to learn information. Helps with confidence and self-esteem. Is enjoyable."*

In the post-implementation questionnaire, Teacher 1, who had been able to implement the approach responded *"Extremely useful for classroom management and for teaching phrases and concepts that must be memorised. It makes learning fun. It also improves vocal ability and develops pitch."*

Teacher 2 wrote *"They get to express themselves"*

Teacher 3 responded *"Very enjoyable! As with everything, time is a massive constraint and music and singing often get dropped in favour of another subject when I should look at integrating it more."*

4.2 Post-Workshop questionnaire findings

This questionnaire focused on the effectiveness of the workshop and how the teachers responded to the information and resources provided.

Teacher 1 and 2 completed this questionnaire, but Teacher 3 omitted to and ultimately it was decided that it was not useful for this teacher to complete this section subsequent to the implementation period.

Figure 14 Effect of workshop

Questions re perceptions of effect of workshop				
1 Least	2	3	4	5. Most
How useful do you think this workshop will be in enabling you to do more vocal exploration and singing with your class(es)			5	4
How helpful do you think the information about research into childhood voice development will be to you in supporting singing with your class(es)?			4	4
Following the workshop, how prepared do you feel to incorporate vocal exploration activities into your class(es)?			4	5
Following the workshop, how prepared do you feel to incorporate singing and vocal exploration into your class(es) for task based and classroom management activities?			5	5
			Teacher 1	Teacher 2
			Sen. Inf./1st class (6-7yrs)	5th Class (11 yrs)

The participants were asked to identify any aspects of the research information that the participants felt to be particularly helpful or unhelpful. The response from Teacher 2 is instructive.

"I thought learning about the different milestones of development was interesting. However, a lot of the information about ranges and notes that children can hit at different ages was a bit lost on me. (Through no fault of yours whatsoever, just down to my lack of knowledge in this area!)."

This shows that a lack of background musical knowledge created a barrier to understanding the information in training materials. The pre-workshop questionnaire had indicated that Teacher 2 could not read music, so it may have been useful to incorporate a more practical demonstration of this information.

Teacher 1 indicated that the balance between information and practical activities in the workshop was right for them, while Teacher 2 felt more practical activities would have been useful. This desire, which is a reasonable request, may also be indicative of a lack of confidence based on their lack of experience, as reported by them elsewhere.

Figure 15 Resources and effect on confidence

Questions about amount of resources and effect on confidence		
1 Not enough / Less confident	2 Enough / No change in confidence	3 More than enough / More confident
Do you feel you have sufficient resources from the workshop to help develop vocal exploration and singing activities with your classes?	2	3
Do you feel any more or less confident about singing with your classes?	3	3
	Teacher 1	Teacher 2
	Senior Inf. / 1st class (6-7yrs)	5th Class (11 yrs)

Teacher 1 reported feeling that enough resources had been provided in the workshop, while Teacher 2 felt that more than enough had been provided, which contrasts with their wish for more practical activities. This could be illustrative of the value of experiential training for this type of activity as noted by Kenny (2017) in considering the experience of pre-service teachers in training.

While Teacher 1 indicated that they felt enough resources had been provided, they also commented on a wish for more songs for classroom management, indicating their particular interest in the application of the training and project aims.

4.3 Group Interview Data Findings

The post-implementation group interview transcription was coded to produce qualitative data. The coding scheme is shown in Appendix VII, and the coded transcript is included as Appendix VIII. Two sets of codes were used simultaneously:

1. one set of deductive evaluation codes developed from the intended outcomes of the project (Project Aims codes), which had magnitude codes (Saldaña, 2016) were applied on a five-point scale from Very Negative to Very Positive.
2. Inductive concept codes (Saldaña, 2016) developed from the text, to identify themes and issues which can be drawn from the teachers' experiences with the project.

These codes were then gathered into four categories shown in Figure 16, and the data is discussed here under these categories, before consideration of the consolidated data from the project through a case study approach.

Figure 16 Coding categories

Categories
A Indicators of success of project implementation
B Indicators of future impact of project
C Indicators of barriers and issues in implementation
D Wider music curriculum issues.

4.3.1 Contributions of each Teacher to Interview discussion.

Figure 17 shows the frequency of project and concept codes ascribed to the contributions of each participant in the group interview.

Figure 17 Code frequencies per participant

Codes	Teacher 1	Teacher 2	Teacher 3	Total
Project Aims codes	31	8	5	44
Concept codes	58	15	15	88
Total	89	23	20	132
	67.4%	17.4%	15.2%	

As has been noted, Teacher 1 was the only participant who was able to implement the approach in the classroom. During the interview, this teacher made the largest contribution

as they had the most to report. Approximately two thirds of the codes ascribed to the textual data were ascribed to statements made by Teacher 1, with the other third being split more evenly between Teacher 2 and Teacher 3.

4.3.2 Category A: Indicators of success of project implementation.

Seven of the Project Aims were ascribed to this category and assist in measuring the success of the project.

1. Understanding of Singing Development

Teacher 2: *"a lot of songs on YouTube are .. adults singing them and ... obviously, children have different ranges and stuff and some things ... even we were learning Irish song It does go very high and they can go high to be fair, the kids, but it was adult singing."*

Teacher 3: *"...we were young... it was always a children's choir singing it..., or a child soloist singing so it always suited our voices."*

These statements show some appreciation of the difference between the singing ranges of adults and children, and the appropriateness of a child's voice as vocal model. These aspects of childhood singing development had been discussed during the training session (see Appendix IV). Both statements indicate a 'somewhat positive' understanding of Singing Development, which may be linked to the training session and project, as both these teachers reported in the questionnaire that their understanding of this area had improved somewhat. The project aim was that teachers 'Gain greater understanding of singing development' and as such this aim can be viewed as having been achieved.

2. Confidence using methods

Teacher 1 was the source of data as to whether the teachers were confident using the methods discussed in the training workshop. The workshop had included practical demonstrations of classroom management methods that could be adapted to a singing approach, such as attention-getting rhymes that could be sung to a simple two note pitch pattern, or the suggestion of using known nursery rhyme tunes and changing the words to match classroom management tasks as required (see Appendix IV). Teacher 1 made positive statements in relation to these specific methods that the teacher had implemented:

"a lot of the rhymes that you had given us, you know, suggestions and even just adding a little bit of something to just a nursery rhyme. Do you know what you mean and just find a rhyme and sing it?"

This indicates the success of this aspect of the approach for Teacher 1, using singing throughout the day for classroom management tasks.

The use of vocal exploration by the teacher had however been less successful.

"I suppose maybe I'm not as comfortable with it or I didn't know as much when you were doing it, it seemed it was so natural."

".... it probably more has more part of the music lesson rather than in an everyday kind of setting."

"... I'd remember bits and then I'd be going how did she go about doing that now and my own little notes and everything would never be as good ... Even ... I'm sure I can find some on YouTube myself."

"... Like if you even had a video that you could watch yourself or even show to them and then, because once they have seen it, then you can work together to explore and change it yourselves"

Inductive codes ascribed to these statements also indicate a wish for more training and resources in this area to feel more confident. This outcome suggests that the training could be adapted to include more practical experiences of vocal exploration activities, and follow-up materials such as instructional videos or supplementary training sessions may also be beneficial in supporting this aspect.

Teacher 2 and 3 however had not successfully used the methods, so for them this aim of the project had not been successful. Possible reasons for this are discussed further under the Case Study section.

3. More ways to incorporate vocal activity

Teacher 1 was very positive about how they had found more ways to successfully incorporate vocal activity throughout the school day, particularly in the contexts of classroom management and well-being activities. This part of the approach is central to the project, and discussion and practical activities in this regard were covered in the training workshop. This approach forms part of *The Singing School Handbook*, a Sing Up / Faber publication supporting the Sing Up programme in schools (James, 2018).

"Integrating it with my .. well-being morning meeting, you know that we'll sing the 'Rolla' [school register] and we'll have used it to help to just add a bit of music to some of their Irish phrases"

“And we have used it for ... a well-being check in every day about our feelings. And we're sitting around the circle. And actually that's lovely because I had a student teacher in and she did a music lesson where they were clapping. They were adding body percussion to their names and then they automatically themselves added in this little bit of percussion into our little round that we do every morning where we say how are you today, you know and so they use that every morning.”

This story especially indicates how the students have engaged with and taken ownership of the practices, and that they are integrated into regular classroom activities.

“And then ... I've added it to ... my classroom management to get attention.”

This shows clear success for Teacher 1 in respect of this project aim, but not for Teachers 2 and 3.

4. Confidence using own singing voice

The interview did not demonstrate that the teachers had increased in confidence in their own singing voices. This is also discussed earlier in relation to the questionnaire data. Overall, this project did not show success in this project aim. This may point to a need for more experiential training and opportunities for the teachers to become comfortable singing together, and greater levels of support for the teachers in implementing the approach in the classroom (Hennessy, 2000).

5. Successful and confident use

Positive and very positive statements were made by Teacher 1 indicating successful and confident use of some of the approaches.

“I find they really have responded well. I've used it mainly with ... classroom management kind of activities, everyday activities.....I actually couldn't believe how well when I sang to them how they would sing back to me, you know that they would just, that they just absorbed it and I didn't have to say. Now you sing that too.”

“I had these phrases that I would say, and I just started to sing them and all of a sudden they started to sing them back to me, either in a kind of a call response or just mimicking exactly what I had sang.”

“That's what the five things are, and I would have done that anyway, and they knew what that was. But now we sing ‘Show me five’ and they will say ‘here is five’ and they come up with that themselves. ‘Here is five’. They sing it back to me”

“And I have a lot of very boisterous boys who would not be natural singers. The girls would be great. They love to sing. But my reluctant boys are starting to like their bit of singing in fairness.”

"It's ... just the culture of the classroom now, that we sing"

"I only had them last year and they were there when I was doing it this morning and I could see them looking at me thinking what is she doing? She never did this last year."

"I've gotten really used to using it for management for my little songs and things"

However, Teacher 1 was less successful with vocal exploration activities, indicating that they had done *"a little bit of"* these.

Teacher 2 was more negative, describing having intentions which *"fell by the wayside after about a week"* and that *"I think we're just such creatures of habit sometimes that I didn't get into the habit of doing it often enough"*. Teacher 3 was also negative in this regard, indicating that other responsibilities and activities meant they were unable to apply the approach,

"I think I got caught up with all my courses and all that kind of thing. And then we had communion or well confession and communion and it would just. no time."

The responses indicate that where the approach was used, the project aim was achieved for both teacher and students. To develop the project, barriers to using the approach will need to be considered and addressed in the planning and scheduling of the training.

6. Increased singing and vocal exploration

Comments from Teacher 1 indicate the increased singing activity in their class, but less of an increase in vocal exploration.

"I do notice more and more of them ... we did start. I did start singing the 'Rolla' in the morning, and at the start, very few of them 'tá mire scoil' '..... but they didn't sing it. But as the time has gone on, more and more of them are singing it. And more and more of them are singing in tune, which I think is amazing. that they're actually getting the note and singing it in tune."

"..... four months in, I would say 95% of them were singing, I would say at some point during the day they sing something to me."

"At the start, we did do a bit of it [vocal exploration] and then I suppose because it's to be honest, it kind of fell by the wayside. "

[Vocal exploration] *"they kind of fall by the way. it's probably something I need to go back and revisit now."*

This again shows that where the approach was implemented, project aims were achieved in terms of singing, but less so with regard to vocal exploration. As such it is the barriers to

implementation generally that need to be considered, but also the differences in accessibility to the vocal exploration activities compared to the singing activities.

The statements by Teacher 1 suggest that they were less confident in using the vocal exploration activities as they were unfamiliar activities to them compared to singing songs and rhymes, and this would apply to the students equally as the teacher had already indicated a good level of singing activity existed in the class. They also noted that when this new activity was tried, the class management became more difficult

“My class are very boisterous, we’ll say, and it got a little bit overbearing! Yeah. I just was like, OK, we leave that lesson for today. And I think it to be honest, they kind of fall by the way.”

Hennessey (2000) noted this aspect of introducing a new activity to a class when considering the position of a student teacher bringing practical work that is not regular and routine for the children, and as such their reactions can be ‘exuberant’. While Teacher 1 is very experienced, the extra management issues that this activity caused while unfamiliar would understandably cause them to approach it less easily. This aspect could be highlighted in the training workshop. It may also be helpful for the music specialist to do a vocal exploration workshop with teacher and students to get this aspect underway. However, care would have to be taken that this activity by a music specialist did not disenfranchise the teacher (Hennessey, 2000; Russell-Bowie, 2009).

7. Increased awareness of vocal development

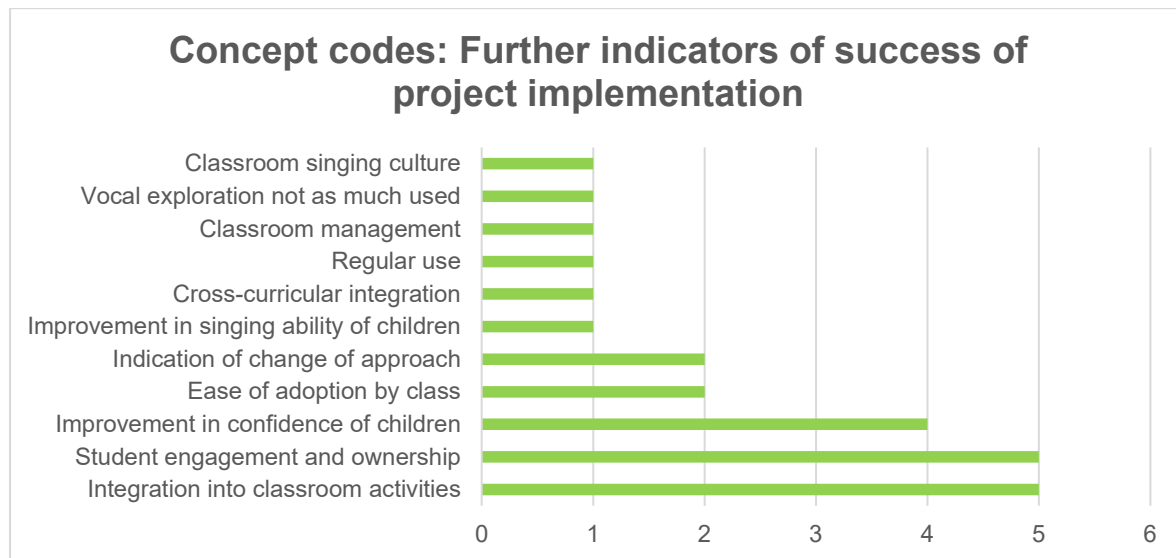
Despite successful use of the approach, Teacher 1 does not describe an increased awareness of vocal development`.

“I don’t have much of it I’ve actually used you know, about their actual development and stuff and how much of it I actually absorbed and actually thought about, before using it, I just used it as best I could.”

However, in the questionnaire responses, all three teachers responded that their knowledge in this area had increased somewhat. Overall, the data does not demonstrate that this project aim was highly successful and suggests that this information would benefit from being revisited in the light of experience and built upon using practical exercises where possible.

4.3.3 Further indicators of success of project implementation

Figure 18 Concept codes success indicators.



The inductive concept codes also ascribed to category A 'Indicators of success of project implementation', came largely from statements by Teacher 1 and describe largely positive aspects of the implementation of the project which reflect the levels of achievement of the Project Aims discussed above. They strongly indicate success in integrating the approach into classroom activities, a high level of engagement and ownership from the class in the activities and the improvement in confidence of the children in singing. Other indicators describe the ease of adoption by the class of the methods, an indication of a change of approach by the teacher through involvement in the project, cross-curricular integration, regular use, use for classroom management and the identification of a classroom singing culture, also noting that vocal exploration was not as successfully implemented.

4.3.4 Category B: Indicators of future impact of project

This category includes codes indicating what the future impact of this project might be. Two Project Aims codes are grouped into this category.

8. Awareness of benefit of activity

The data here showed that all teachers viewed the project and activities positively, which would be hoped to encourage continued use or future adoption, despite only one teacher being able to use the approach in class.

Teacher 1 *"I have to say it is very positive"*

Teacher 1 *"They'll actually be delighted"*

Teacher 1 *"It's a nice fun activity that we can try in these last two weeks."*

Teacher 1 *"I do think .. if they're coming up with it like that, ... if they've been doing it all along, by the time they get to 5th or 6th it's not weird"*

Teacher 2 *"It is very fun"*

Teacher 2 *"I absolutely do see the benefit of it"*

Teacher 3. *"I'm going into [special education needs class] in September. And a lot of them are going to be very young. So I think that will suit there too"*

Teacher 3 *"have you got them next year? ... So you can continue that?"*

9. Indication of effectiveness of training and guidance

Statements by Teacher 1 and Teacher 3 indicated the participants' views on the effectiveness of the training and guidance, and were largely positive, Teacher 1 however was not sure how much they had gained from the information on development and had not done much vocal exploration.

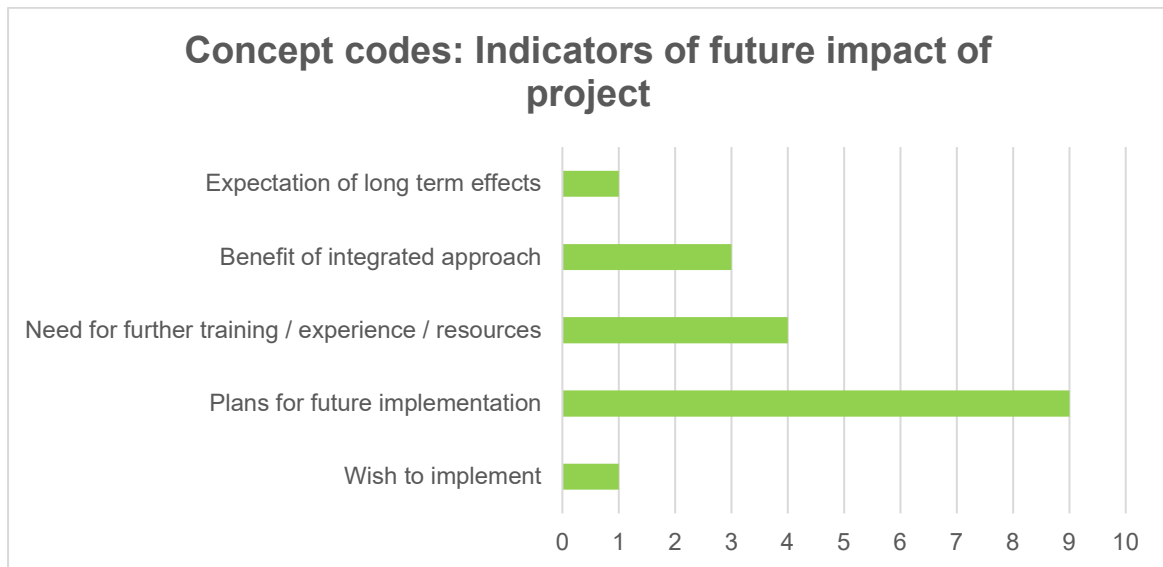
Teacher 1 *".. those suggestions were excellent. They just take a little tune, you know and just add the phrase to it to mean it doesn't have to be something that you find on YouTube. It doesn't have to be a new song, ... because it is still those basic patterns."*

Teacher 1 *" It was very interesting at the time. I don't have much of it I've actually used you know, about their actual development and stuff and how much of it I actually absorbed and actually thought about, ... used it as best I could."*

"We did do a little bit of it. [vocal exploration]"

Teacher 3 notes positively the benefits of the structures provided by the training approach.

"And I mean you're after giving us a bit more structure to the whole thing"

Figure 19 Concept codes future impact

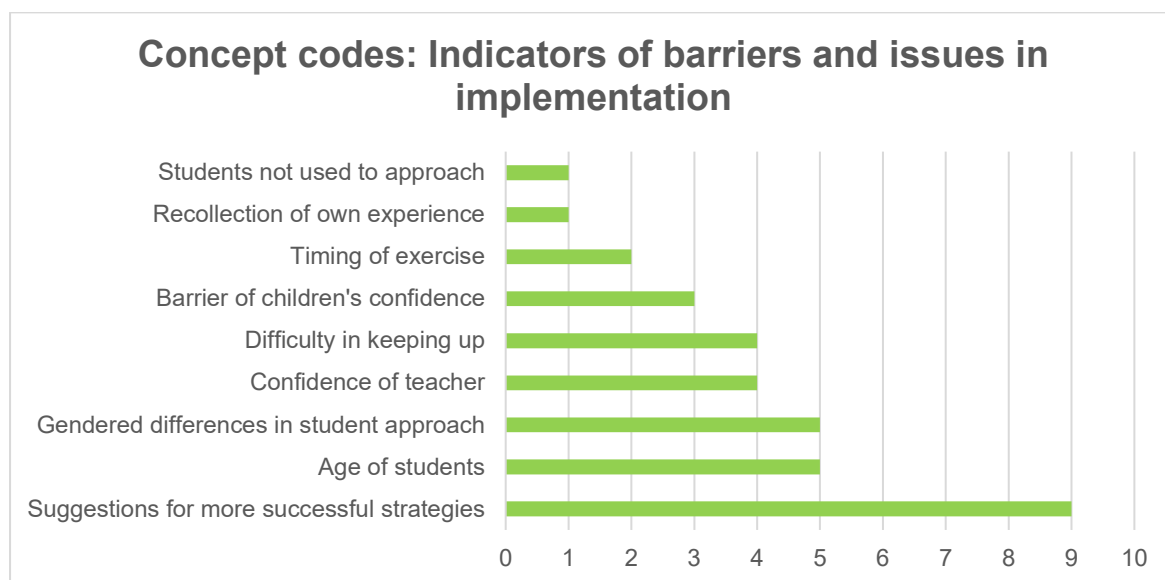
The inductive concept codes ascribed to this category indicated strongly that the participants had plans to continue or begin implementing the approach. They also showed a need for further training and resources and an appreciation of the benefits of the approach of integrating singing activity into the school day.

This suggests that this approach of empowering the teachers to do these activities with their classes through a mixture of background knowledge and practical activities can encourage a positive attitude towards musical activity. It also suggests that the training has merit as singing advocacy even where a teacher does not fully implement it. However, it also points to a need for additional training, support and resources for the teachers to improve the success of the project.

4.3.4 Category C: Indicators of barriers and issues in implementation

This category examines what barriers and other issues are identified as affecting the success of this approach and the specific project. This category consists solely of inductive concept codes from the interview discussion.

Figure 20 Concept codes: barriers and issues



The most frequent type of statement in this regard were suggestions for more successful implementation strategies. These included starting in September, which is linked to the issue of the timing of the exercise; building up use of the activities; developing a routine; continuing into successive years; identifying extra types of training and follow-up resources for teachers; finding a balance between prescriptive resources and those which teachers can adapt. Many of these strategies are supported by the literature indicating that regular and routine singing activity has the greatest impact on children's singing development (Demorest, Nichols and Pfordresher, 2018; Chen-Hafteck, 1997; Welch, 2015).

Several statements discussed the differences and issues relating to the age and gender of students. Students were seen as more open and adaptable to the approach when they were younger and older students who had been following this approach for a number of years would be more comfortable with it and more used to singing, whereas older students to whom this was a new approach would find it harder to adopt. It was observed that the boys in the classroom which had implemented the approach had taken longer to become comfortable with the amount of singing than the girls had, and there was an expectation expressed that girls would be more open to the approach than boys. These issues of age and gender are reflective of the findings of studies in this area, that the younger years are

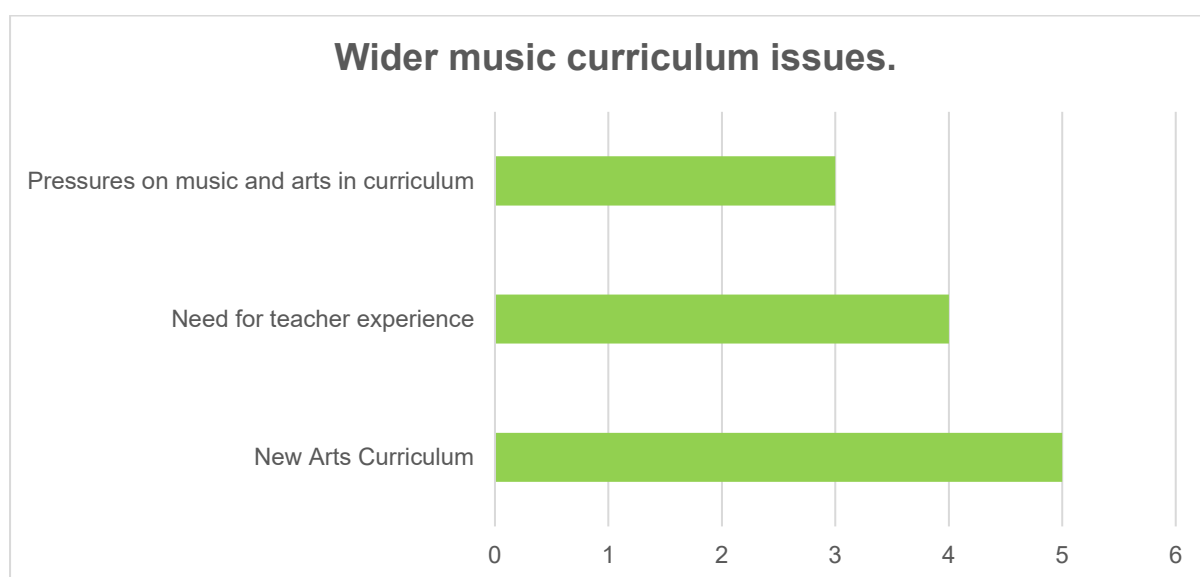
most conducive to singing development, and that boys can be less open to singing than girls, possibly due to societal expectations (Svec, 2018; Welch, 2015).

Other issues noted in terms of the effect on implementation are also reflective of research findings and include those of teacher confidence and the pressure of other curriculum demands, and the issues of students being unfamiliar with the approach (Hennessy, 2000).

4.3.6 D: Wider music curriculum issues.

Towards the end of the interview, the group discussed broader issues of implementation of the music curriculum in schools. This discussion was coded to a fourth category.

Figure 21 Concept codes: wider music curriculum



Some interest and concern was expressed as to the content of the newly revised Arts Education curriculum, which was undergoing consultation at the time of the research project and is due to be implemented in September 2025. The view was expressed that teachers needed to be experienced in Arts subjects, particularly in Music and Drama, to successfully implement the curriculum, and also commented on the risks that Music and Arts can get sidelined due to the demands of other aspects of the primary curriculum and the confidence of the teachers. These views and concerns are reflected frequently in research in this area (Kenny, 2017; Hennessy, 2000; Hogan, 2021; O'Callaghan, 2003).

4.4 The Participants' Stories

It is possible to build a picture of the experience of the individual participants in terms of their musical backgrounds, how they experienced the project and what may be observed therefrom in the form of case studies.

4.4.1 Teacher 1

Teacher 1 assessed themselves as having a moderately musical background, having studied music to Junior Certificate level in secondary school, being able to read music and having sung in choirs and played the recorder. Their musical memories from Primary and Secondary school were very positive and they felt confident singing with other adults and with their own classes. Teacher 1 had done some training in music education during Initial Teacher Education but no in-service training.

This teacher reported high expectations for how useful the training for this project would be, particularly noting that they were looking to utilise it in classroom management. This shows a level of thought and understanding of the project which enabled a focus on how it may be implemented for them.

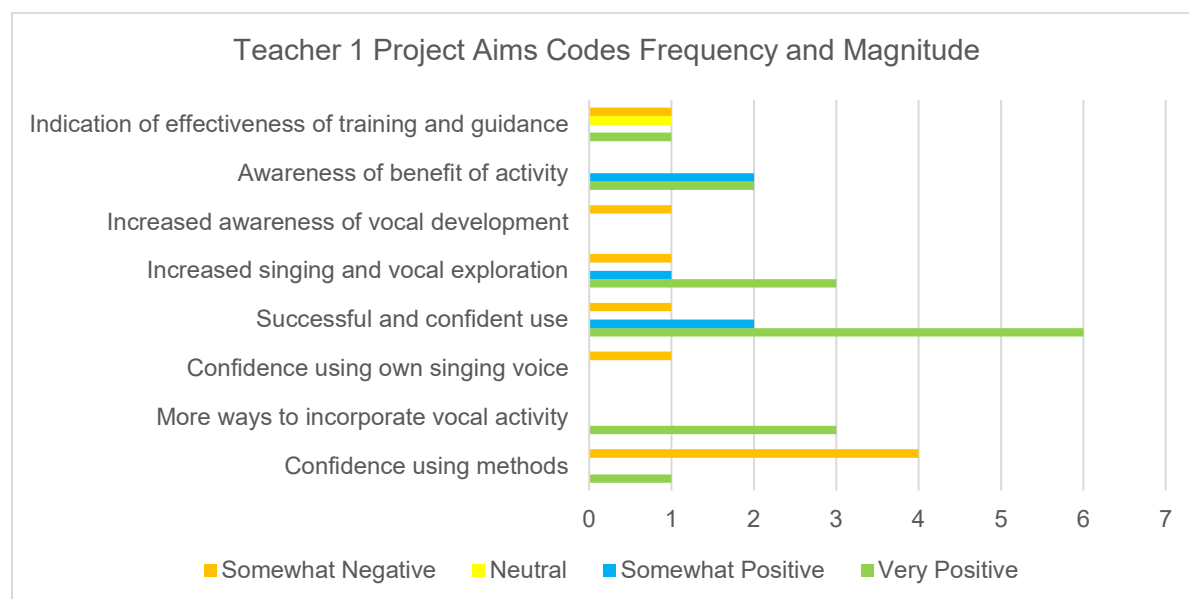
Teacher 1 gave a low self-assessment of their own knowledge of childhood musical development but did refer to musical terms 'soh-mi' when describing any knowledge which reflect their having some musical background.

Teacher 1's class are Senior Infants and First Class students who are six and seven years old. In terms of singing development, this is a stage where a lot of progress may be seen (Rutkowski and Miller, 2003). The Teacher finds that age group to be at a receptive age. *"I think I'm the one has used it mainly because my lads are that bit younger." "They're so young and that also makes it easier for me to do it because you're not so self-conscious."*

The latter quotation also illustrates issues of teacher self-confidence as a barrier to implementation (Russell-Bowie, 2009; Hennessy, 2000). Prior to the project, this teacher sang some days of the week with their class, and gauged some of the children as confident singers, reporting that around half of them could use their singing voices and sing in-tune.

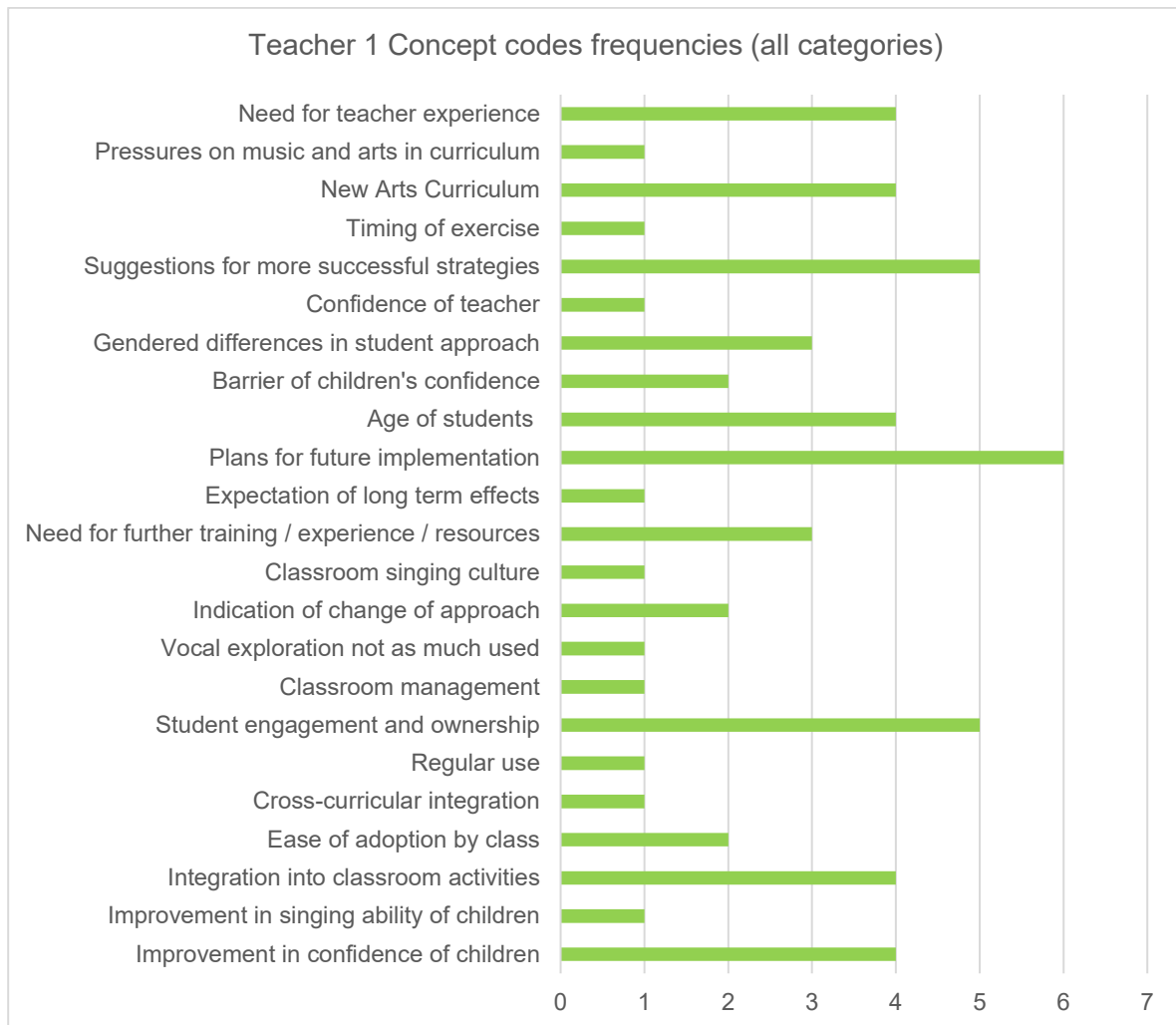
Teacher 1's response to the training workshop was positive and showed a high level of engagement with the activities and satisfaction with the resources provided. It is possible that their musical background and focus on how they could implement the approach enabled an enhanced level of engagement with the training and materials.

Figure 22 Teacher 1 Project Aims codes



Teacher 1 was able to implement aspects of the approach successfully in their classroom. Areas of success were the use of singing in adapting common tunes for classroom management activities, and well-being and cross-curricular learning activities, which succeeded in integrating singing throughout the school day. The teacher was satisfied with the resources provided for these activities. Increases in singing activity by the class were reported, and increased singing confidence and skill. The teacher observed that the children were engaged in the singing activities and took ownership of the approach, creating a classroom singing culture over the implementation period for the project.

Figure 23 Teacher 1 Concept codes



Teacher 1 did not successfully use many vocal exploration activities. This can be related to a lack of experience in this activity and the teacher felt that more training would be helpful, expressing a willingness to implement this in the future.

Teacher 1 did not report an increase in knowledge of childhood voice development as a result of the project. While they reported an increase in musical self-confidence, an increase in their own singing confidence was not shown in their responses.

Teacher 1 also discussed the barriers of children's confidence when starting the approach, and the gendered differences experienced and expected.

".., confidence for the kids, I would say it's a big barrier, .."

"And I do think it's that they're a bit embarrassed. ... Especially the boys, they're like, oh, I'm not singing..."

Teacher 1 agreed with the other teachers that implementing this approach may be more successful with a start at the beginning of the school year, and had suggestions for strategies that may be more successful:

“.. if you even had a video that you could watch yourself or even show to them and then, because once they have seen it, then you can work together to explore and change it yourselves.”

“Now that I think, it's great to kind of introduce it in phases.”

“In September, you're so fresh and you're so full of things.”

4.4.2 Teacher 2

Teacher 2 reported a low level of musical ability, and their formative memories of music indicate a low level of musical confidence. This teacher recalled more training hours in music during Initial Teacher Education than the other teachers, but had done no further in-service education.

Teacher 2's students are in Fifth Class, making them around 11 years old. This is not the target age group for this project, and some of the observations about the outcome may be linked to the age group involved.

This teacher reports that the class are enthusiastic and confident singers, with around three-quarters of the class using their singing voices and singing in tune, which greater level of skill is to be expected at this age (Welch, 2015). The class sang on some days per week.

Teacher 2 was positive about the project in the post-training questionnaire, while responding that more practical activities would have been useful. This emphasises the importance of experiential training to address lack of musical confidence in teachers (Kenny, 2017).

Teacher 2 was not successful in implementing the approach in the classroom, although they emphasised that they had intended to do so. This was attributed to the difficulty in maintaining the activities with an older class who were used to a different approach to singing and may also be influenced by the lack of musical confidence expressed by the teacher.

The teacher did continue to exhibit a positive attitude towards the project aims and approach. They did not report increased confidence in their musical self-image but did rate their singing confidence more highly post-project. Some interview statements indicated an appreciation of aspects of singing development in children.

Figure 24 Teacher 2 Project Aims codes

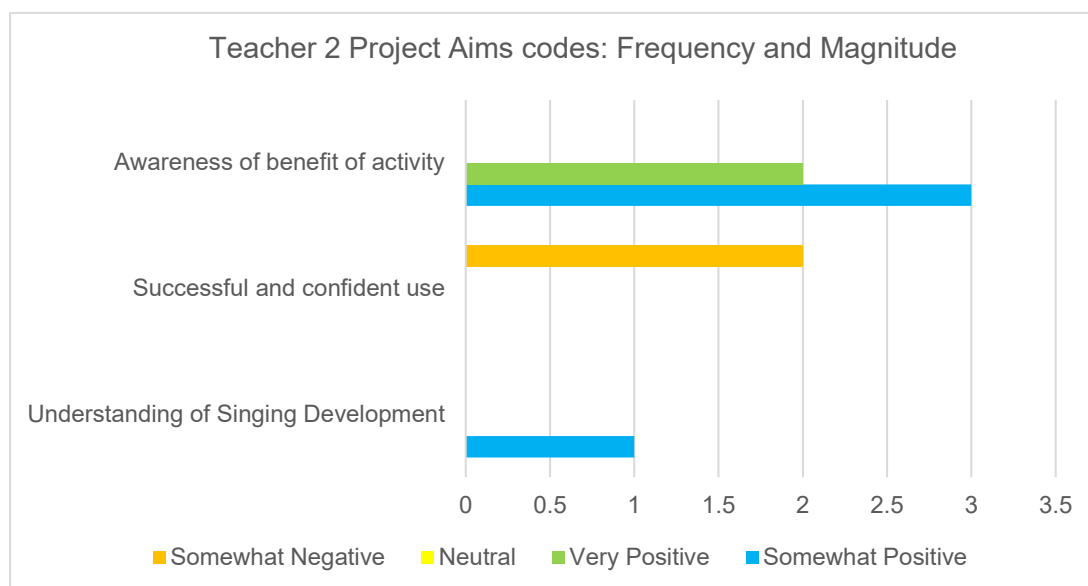
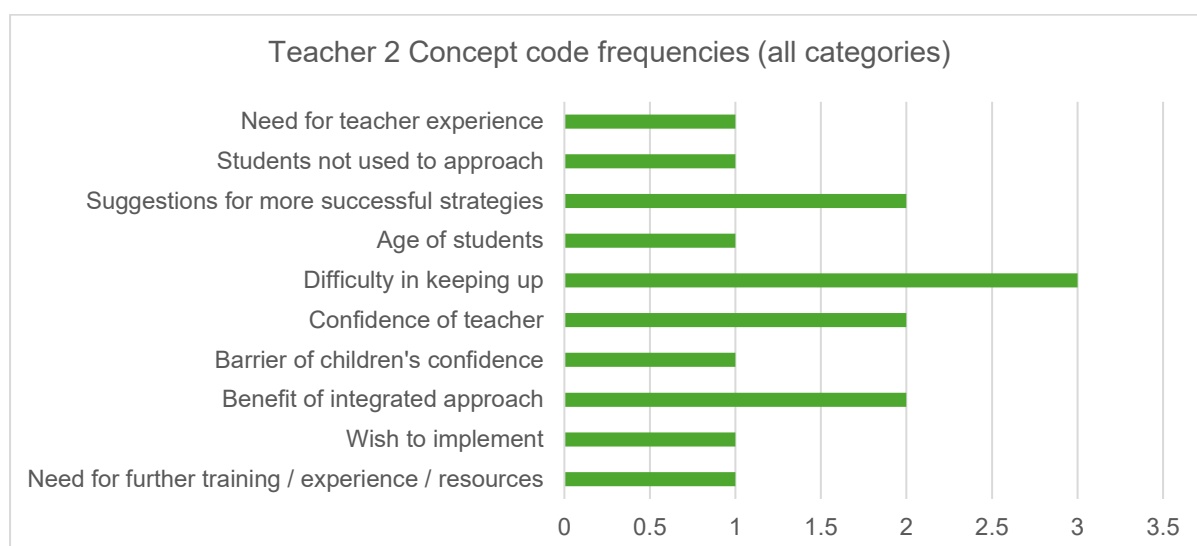


Figure 25 Teacher 2 Concept codes



Teacher 2 showed an appreciation of the benefits of the approach of integrating singing throughout the school day, noting that they had wished to implement the approach though it had not proved possible and asking after the availability of resources which might prove helpful.

Several statements give insight into the factors that blocked implementation for this Teacher. This older class seem to be comfortable with the song-singing approach that they are used to and less inclined to take on new unfamiliar activities.

“even we were learning Irish song like we were all just trying to way it was too difficult. It does go very high and they can go high to be fair, the kids, but it was adult singing and so...”

‘I did start on those .. Irish songs, and then they just fell by the wayside after about a week.’

“That was, I think we're just such creatures of habit sometimes that I didn't get into the habit of doing it often enough”

“but to be quite honest, they just kind of fell away, and they've been singing songs that, you know, we're learning in Irish or English”

“Confidence will be a barrier I'd say with mine as well, yeah”

Teacher 2 also indicated an expectation that children who started this approach at a young age would be very used to it when in 5th and 6th class, which is the age of Teacher 2's class.

4.4.3 Teacher 3

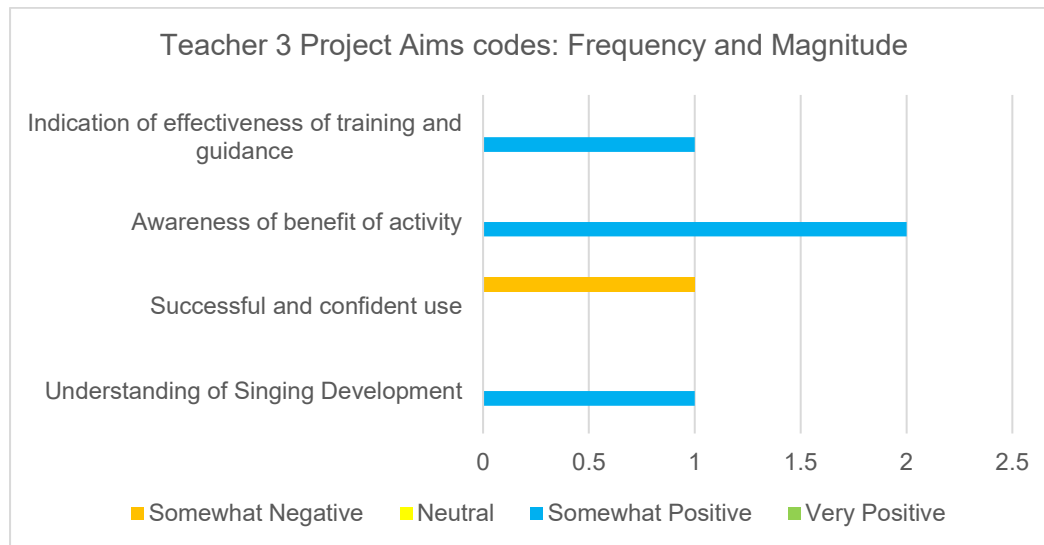
Teacher 3 reported a high level of musical confidence, ability to read music and substantial musical activity both during Primary and Secondary school and currently. Teacher 3 recalled a similar music education training experience to Teacher 1 and had also done some in-service training for an online music curriculum.

Teacher 3's Second Class are approximately 8 years old, and the teacher reported that they sang around once a week, some were confident singers and around half could use their singing voices and sing in tune. The class enjoyed singing activities.

Teacher 3 was unable to successfully implement the approach in the classroom. This was attributed to other pressures of curriculum and professional training activities and the difficulty of establishing new routines at a later stage of the year.

Teacher 3 did feel that their confidence in their musical ability increased, but also reported slightly lower singing confidence. This could be anomalous, or due to involvement in a project which engendered more personal reflection on these aspects of musical self-image. Teacher 3 remained positive about the benefits of the training, feeling it would have been especially helpful if they had received it earlier in their career. They also stated an intention to see what could be applied of the approach in the future as they move into a Special Educational Needs classroom.

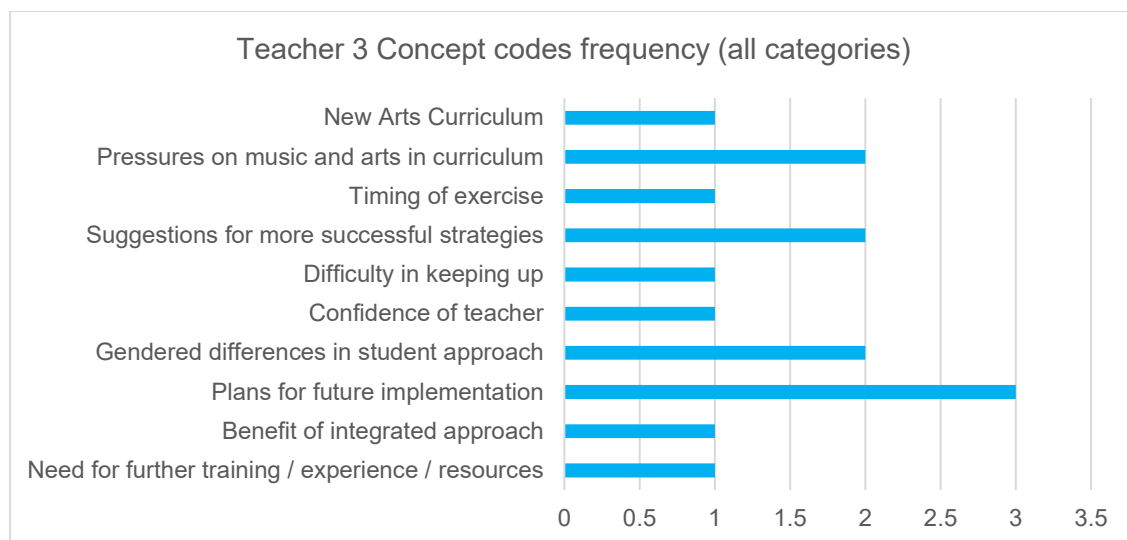
Figure 26 Teacher 3 Project Aims codes



Despite not having been able to implement the approach in the classroom, Teacher 3 made somewhat positive statements regarding understanding of singing development, awareness of the benefits of singing activity and their assessment of the effectiveness of the training and guidance.

Teacher 3 noted the benefit of the integrated approach to classroom singing demonstrated in the project and indicated that they plan to implement the approach themselves in the future.

Figure 27 Teacher 3 concept codes



The barriers for Teacher 3 include the general difficulty of making a habit of the approach with other pressures and responsibilities, and the suggestion that starting the implementation of this approach may be more successful at the beginning of the academic year. Teacher 3

also agreed with Teacher 1 on differences perceived between genders in how students respond to this approach.

Teacher 3 also identifies the pressures that exist in the curriculum areas of music and arts when other curriculum areas are more demanding of time and resources.

4.4.4 Discussion

These case studies show how particular barriers and advantages can be in place for individual teachers despite an overall willingness to engage with an approach. In the case of Teacher 1, advantages may be identified in the age profile of the class, which at age 6-7 is a particularly receptive time for singing and singing development (Svec, 2018; Rutkowski and Snell Miller, 2002). The teacher's clear focus on how they could use the approach for classroom management can also be seen as an advantage.

The principal barriers can be identified as teacher confidence, as is widely discussed in research literature, which when linked with an older class in the case of Teacher 2 meant that the class were less receptive to new vocal approaches. Changes in attitude to singing amongst older primary students are recognised (Welch, 2015). As the class were already enjoying singing activities and showing competency in this area, Teacher 2 had little other impetus to introduce new practices.

Teacher 3 demonstrates particularly the issues of the pressures on a teacher from other areas in the curriculum which may interfere with musical activity (Hennessy, 2000; Russell-Bowie, 2009). While their class may have benefited from the project, it proved not possible due to the timing and other responsibilities of the teacher which gave little opportunity to develop the approach with the class.

4.5 Study Limitations

The participant group for this study was small. A larger test group may have given a clearer picture of issues and prospects for successful implementation.

All three participants indicated positive attitudes towards singing activities with their classes. In a future study, it would be useful to have some participants who reported not singing with their classes and see if this could be impacted positively.

The researcher had the role of music specialist providing the training and support, and the small group size meant that there was a good rapport between researcher and participants. This may bring into question how honest some of the responses may have been. More reliable results may be achieved with a larger group and a more impersonal relationship between participants and researcher.

5. Conclusions

5.1 Research Questions

The research questions for the project aimed to establish

- the effectiveness of the provision of a training and guidance programme for classroom teachers in achieving the project aims.
- the circumstances which affect the ability of the classroom teachers to successfully implement the approach to classroom vocal activity.
- what recommendations can be made for the further development of the training and guidance programme arising from the project.

The project aims were substantially achieved in the case of Teacher 1 and shows that where a teacher can implement the approach it can be very successful in integrating singing activity into the classroom, but that further training and support was needed to achieve confidence in the area of vocal exploration.

In the cases of Teachers 2 and 3, the project aims were largely not achieved, although both teachers demonstrated an awareness that the approach could be of benefit and importance to their students.

All participants maintained an opinion that this approach could be of benefit to Primary School students in supporting their singing development, the wider music and arts education curriculum, and cross-curricular learning and well-being activities.

The purpose of information on childhood voice development included in the training is to put the approach in context and provide reasons for the importance of the activities. This project did not demonstrate that it is necessary for teachers to increase their understanding of this area for a classroom singing culture to develop, but did show that attention given to the area through the training can have a beneficial effect on attitudes to singing activity in general.

Teachers who already feel themselves to be musical may have an advantage in implementing the approach over those who have low self-confidence in this area. More experiential training support may be of assistance to teachers who feel less musically experienced (Hennessy, 2000; Kenny, 2017).

Singing activities may be more readily adopted than vocal exploration activities, as singing may be a more familiar activity to teachers. Singing can be readily integrated into other classroom activities, whereas vocal exploration activities may be viewed as more specific to

music or drama curriculum times. Therefore, the training activities should give emphasis to vocal exploration and additional audio-visual resources developed in this area.

This approach is more readily adopted by younger classes, who are the target group for this type of vocal development support (Svec, 2018; Welch, 2015).

The timing of training for and implementation of the approach can have implications for its success, and an individual's workload can create barriers for their ability to incorporate the approach into lessons. It may be beneficial when teachers can envisage clear practical benefits for their classroom.

5.2 Future recommendations

The researcher makes the following recommendations for further development of the programme:

- That the approach should be started with classes early in the academic year to facilitate integration into classroom routines.
- That training should include more practical activities to enable the teachers to gain direct experience of the approach.
- That training should be done in stages, with a follow-up during the project to look at areas which are proving more difficult to implement, and possible engagement with the whole class by the music specialist providing the training.

This project has identified some conditions under which the approach can be successful, where a classroom teacher has some musical background and self-confidence in their singing voice. While a musical background is beneficial it is demonstrated that this advantage can still be lessened by the pressures on the generalist teacher to manage the whole curriculum.

A challenge for further development of the approach is to create the conditions in training and experience under which teachers who do not have the pre-existing advantages can have success and see the benefits of the approach.

The training material focused on ways in which vocal exploration, short and simple songs and call and response patterns can be embedded into classroom activities, thereby incorporating aspects of research-supported vocal instruction techniques in an environment where they can be experienced daily. This project is supportive of the proposal that these are aspects which do not have to be done by a specialist and could be incorporated into the

school day and led by the classroom teacher who has received sufficient training and support to empower them to do so.

The benefits to the children are well demonstrated, but the key is to enable teachers to use these approaches. Teachers need to be armed with knowledge and experience of this type of approach to overcome confidence issues.

Classroom teachers can be supported and empowered to be musical with their classes. The alternative to this approach is to accept an enduring barrier to the effective musical development of children in generalist classrooms.

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