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Module BMPF7008 Workbased learning Project

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WBL Project proposal

1. Project Title Efficacy of a warmup strategy aimed at improving breathiness in adolescent female voices.
2. The context Most research into adolescent voice change is focussed on male experiences (Sweet, 2015). The direct impact of how adolescent voice change in females can affect those who teach this demographic of singers has rarely been studied (Pardoe, 2021) and studies such as McKinney (2005) suggests that practitioners often struggle to teach adolescent females. Within my own teaching practice, I work with adolescent female students and have found that breathiness is an issue in a large majority of their voices which could be caused by the mutational chink that happens during adolescence (Brunssen, 2010; Sale, 2022; Clark,2019).
3. The justification I am undertaking this project because I have observed in my own teaching studio that breathiness can be an issue for young female singers. I struggled to find practical resources and strategies to teach this group of singers and after undertaking research for my formative assignment, created my own teaching strategy. This project should fill some of the gaps in current research by testing my own warmup strategy that could help teachers to address the issue of breathiness in their students but could also be used by students to use during practice sessions at home. Many studies research male voice change but very few focus on female voice change. There is a clear need for more research into the changes that occur in adolescent female voices (Gackle, 2006) and I have a personal need for this as someone who primarily teaches adolescent female singers.

4. The intended impact

This project will enable me to see whether my teaching strategy created in my formative assignment could have an impact within my teaching studio but also for others who work with female students. It will also allow me to fill my own knowledge gaps which is important for my growth as a teacher (Haider, 2003). The warmup strategy may help adolescent females with their practice outside of lessons. There is also the potential to take this project further in order to reach the wider teaching community with a possibility for retention. This project will also help female students to keep singing and not get disheartened with their vocal changes.

5. The outlined intention

This mixed methods study will ascertain whether the warmup strategy I have created helps with eradicating symptoms of breathiness in adolescent females.

Prior to the study, I will reach out to the wider teaching community via target vocal groups on social media to see if other teachers are also struggling to teach this demographic of student. Considering the timeline of this study, I will be looking for a percentage of yes/no answers as this is an efficient use of the research time (Munn, 1990) as it will allow me to spend less time coding answers and will present me with clear data that can be used.

This project will involve two different teachers who have been sourced through my network testing this warm up strategy on two of their students. The warmup strategy will be tested in the setting of a one-to-one singing lesson every week. The teacher should then make brief notes after each session on the pupil's progress.

After the strategy has been tested, teachers will participate in a semi structured interview with myself, the researcher, to share their experiences.

My proposed methods are an initial questionnaire to establish the struggles for the wider teaching community and then two case studies each consisting of a teacher and their adolescent female student. I will hold a semi-structured interview with both teachers which allows for more flexibility and elaboration in the discussion (Denscombe, 2010). These should last between 15-30 minutes. The interviews will then be coded, and the data will be analysed to draw conclusions.

I have created a GANTT chart (Appendix A) which shows the timeline of this project.

6. The ethics and insider research

There are many safeguarding factors to consider as this project involves working with children. I will ensure that any participants have read Keeping Children Safe in Education and undergone staff training for safeguarding. I will guarantee this by asking this as a question in my semi-structured interview. Child protection in music, an Educare course, can also enable my teachers to understand the ethics of working with children in a one-to-one music environment.

Consent forms will be used before undertaking any research and all students and teachers will have their data protected as it will be kept on a secure system which is password protected.

I have limited bias by using other teachers to test my strategy. I will be working with colleagues who know me, and it is important to be aware of how this might alter their interactions with me in the semi-structured interview.

7. Personal learning outcomes

This study will help me to deepen my own knowledge of teaching adolescent female singers, which will ultimately benefit my own teaching and my students learning. There are numerous other benefits to this self-directed learning approach such as building self-confidence, understanding my own needs as a learner and developing my own interests further within this topic (Zulkhumor et al., 2021).

I will also learn whether breathiness in general is a prescribed technique that we should consider in a context of student's performance or if it falls under the category of tone.

Project Report

Project Title: Efficacy of a warmup strategy aimed at improving breathiness in adolescent female voices

Introduction

As a teacher of primarily female adolescent voices, I have found breathiness to be an issue in a large proportion of the singers I teach. Having researched breathiness in adolescent female singers for my formative assignment (Pardoe, 2022a) and projection in female voices for my module 1 assignment (Pardoe, 2022b), I found that there was a gap in both the information available on this topic and a lack of practical solutions when teaching this age group. I started to wonder if other teachers were facing an issue with knowledge gaps when teaching adolescent females and if so, could there be a way of helping both teachers and students to understand this topic and to navigate this vocal change.

Since my initial research, I developed my own warm up strategy (Appendix B) which was designed to help my own students with the breathiness in their voices. Having tested this within my own teaching studio, I started to see an improvement in the clarity of my student's sound and in their projection. Whilst breathiness was not completely eradicated, there was certainly an improvement. My hypothesis for research therefore is that if these exercises worked in my own studio, they could work for other voice teachers. In hindsight, there were ethical implications of testing these on my students first as these exercises could have had an adverse impact if they did not work.

Based on my own knowledge that insider researcher can lead to bias and a loss of objectivity (Saidin, 2016), I chose to eliminate this risk by trialling my teaching strategy on other teachers and their students. These would be selected from my bank of voice teaching contacts, but I would ensure that they are teachers that I am not closely in contact with by using teachers who I have not spoken to in at least five years or more.

One of my learning outcomes is to strengthen my own knowledge of voice change in adolescent females. This will inevitably benefit my own voice studio and my student's learning. I am also interested through this research process to learn more about whether breathiness is a prescribed technique that we should consider when assessing performances or if breathiness falls under the category of tone. This is based on my own experience of entering

students for music examinations as I have found that breathiness and projection is something that often gets commented on in the marking process.

The impact of this project on a small scale is that it could help my own students to improve the breathiness in their voices and to understand more about their own voices. I could also help the vocal teachers taking part in my study to address the issue of breathiness in their own vocal studios. On a larger scale, this work could have the potential to be distributed to the wider voice community and could even be used as a training resource for voice teachers, music education hubs and examination boards. I will develop my own knowledge through undertaking a literature review and testing my teaching strategy to see if my teaching resource works in helping adolescent females suffering from breathiness.

Literature review

This literature review examines the research that currently exists about adolescent female voice change. I will explore anatomical changes, psychological impacts of adolescent voice change, hormonal changes and the impact of breathiness on singers' progression, particularly in the context of music examinations. I will then explore the need for further research into this area.

An anatomical understanding of adolescent voice change

Due to the growth in vocal folds during puberty, female adolescents sometimes present with an increase in breathiness to their voices (Williams, 2019). This sudden change of laryngeal growth weakens the muscles surrounding the larynx and as a result of this, the posterior portion of cartilage in the larynx sometimes struggles to close (Sweet 2015). This is called a posterior glottal chink (Demirci et al., 2021; Gackle, 2006) and causes breathiness in female voices as the cartilaginous part of the vocal folds do not adduct (Smith-Vaughn, 2007). During this time of vocal change, vocal technique must often be reinforced daily through encouragement and positive reinforcement (Leborgne, 2016).

Historically, there has been the assumption that female voices do not change (Gackle, 2006) and Finn (1939) stated that female adolescents manage to escape vocal change. It is possible that this lack of understanding was due to the process of vocal change being less noticeable in females than it is in males (Gackle, 1991). More recently, there has been recognition that physical changes occur in female voices (Gackle, 1991). Ultimately, there is a lack of research into the development of female voices and discussions of voice change historically have

focussed on ‘male vocal experiences’ (Sweet, 2015: 71) leaving teachers of female voices to navigate their students changes with little support. In recent years, there has been more available support through publication of material by Williams (2019), Gackle (2019) and Sweet (2020).

Psychology of voice change

There is a clear psychological impact of vocal change on adolescents with adolescent females being fearful of the sound that they produce during this time (Williams, 2019). Adolescence is a time of enhanced risk psychologically (Brown and Gilligan, 1993; Fergusson et al, 2002), especially since the COVID-19 pandemic (Samji et al., 2022; Ravens-Sieberer et al.,2022) and for this reason we must be careful of how we approach the issue of voice change in adolescent females.

Ashley (2015) suggests that adolescent female singers have a reluctance to use their full vocal range which could be due to their influence from those popular music artists who sing in the middle of their range (Poole and Macdonald, 2022). If this influence from pop music can affect a singer’s choice to sing in a certain register, it is possible that it could also affect their choice to sing with a breathy sound, mimicking that seen in current popular music (Yu, 2017). Sweet (2015), a professor of music education and researcher, found in a pre-study questionnaire taken by adolescent females from Durham School of the Arts that singers commented on a feeling of isolation during vocal change and how they strained their voices to produce the sound they desired. 14 students (aged 11-17) were selected for this study to achieve a varied response with strong validity of data.

Menstruation and breathiness

As voice teachers, one must be aware of the effect of the menstrual cycle and how this can affect young singers as hormonal changes can affect an individual’s voice (Dhanshree et al. 2017). A study by Abitbol et al. (1999), showed that the premenstrual cycle can cause vocal fatigue and a huskiness to the vocal sound. Khare (2020) supports this idea by suggesting that vocal fatigue is caused by dryness during phonation. After exploring the voice by televideolaryngoscopy in early research Abitbol et al. (1999) also found that a posterior chink was evident which can cause breathiness in singers. It could also be argued that breathiness in young singers could be due to an inefficient use of breath flow (Miller, 1995). Additionally, abdominal cramps during the menstrual cycle can have an impact on phonation and affect vocal support (Pardoe, 2022 and Carlson et al., 2003). Opera singers historically were given

time off work because of the effect menstruation has on voice quality and the inflammation of vocal folds (Oberlander, 2010). This leads to the question of whether breathiness in young female voices is a technical, anatomical issue or even a vocal health issue.

Vocal health

Whilst not all breathiness in adolescent singers is caused by vocal health issues, it is worth being aware that a breathy sound is one of the main criteria used to define a dysphonic voice (Park et al., 2022). Due to the scope of this study, it is not possible to go into too much detail about vocal health in adolescent singers, but it is important for readers to be aware of the impact that vocal pathology may have on vocal quality. Vocal dysphonia is often used to describe voices that differ from the norm (Saniasiaya and Kulasegarah, 2020). Whilst many studies describe common symptoms of vocal dysphonia (Carding et al., 2006; Pribuisiene et al., 2020; Heller Murray and Chao, 2021), parameters of the diagnosis are often not discussed. As voice teachers, we should refer to a clinician if we have any concerns about our students' voices, but this is especially needed if a student is experiencing voice issues for longer than two weeks (Ragan and Sataloff, 2017). There are many other factors that may contribute to breathiness in adolescents and a weakness in air pressure such as drinking alcohol (Landman, 2018), lack of sleep (Icht et al., 2020), overuse of voice (Roy et al., 2007) to name a few. It is also worth commenting on the fact that if we try to fully eradicate breathiness as vocal teacher, there may also be a detrimental effect on singers' voices, and this may result in hyperfunction (Leborgne, 2016) as the vocal folds may adduct in a forced manner. There is potentially a limit as to what we can do as vocal teachers to remove breathiness in young singers' voices due to these varying factors.

Performing during voice change

There is a clear correlation between breathiness and projection because if we manage as singers to occlude the vocal tract successfully then this results in a louder sound (Titze et al. 2021) as efficient phonation can help to achieve more resonance in the voice (Ter and Wong, 2022). Many young singers choose to participate in public performances as part of their musical development and some may choose to take music examinations in their subject of choice (Dempsey and Comeau, 2019). With our current knowledge of breathiness in adolescent voices, it is particularly interesting that some music examination boards for classical and CCM have a strong focus on projection in their mark schemes (ABRSM, nd; Rockschool, 2020).

In order to achieve a distinction in both classical and musical theatre exams with The Associated Board of the Royal Schools of Music (ABRSM), one must perform with a well projected tone whereas the criterion for a merit requires a controlled and consistent tone. This may be problematic for adolescent female singers going through voice change as throughout this time, their tone may be breathy and rough (Gackle, 1991). One must question whether projection and tone should be assessed at all when taking music examinations are such a common part of a child's music education (Reporter, 2015).

Figure 1. Marking criteria for ABRSM music examinations.

Performance Grades 4. Assessment and marking

Marking criteria

Grades 1–8	Criteria for each of the pieces/songs presented *Pitch*	*Time*	*Tone*	*Shape*	*Performance*
Distinction 27–30	• Highly accurate notes and intonation	• Fluent, with flexibility where appropriate • Rhythmic character well conveyed	• Well projected • Sensitive use of tonal qualities	• Expressive, idiomatic musical shaping and detail	• Assured • Fully committed • Vivid communication of character and style
Merit 24–26	• Largely accurate notes and intonation	• Sustained, effective tempo • Good sense of rhythm	• Mainly controlled and consistent • Good tonal awareness	• Clear musical shaping, well-realised detail	• Positive • Carrying musical conviction • Character and style communicated

Rockschool exam board similarly notes that the style and expression portion of their mark scheme is not passable without convincingly projecting the music however they differ from ABRSM slightly as they allow candidates to use microphones which helps with amplification of the voice. According to their website (Rockschool, date unknown), this is not compulsory for grades 1-5 which leads to the question of whether candidates may be marked lower if they sing without projection and without a microphone. This could be problematic if singers present with a breathy or thin tone to their voice because of adolescent voice change (Sweet, 2016).

Figure 2. Marking criteria for Rockschool music examinations.

RSL Awarding the Contemporary Arts

DIGITAL MARKSHEETS

4. STYLE AND EXPRESSION

An expressive and commanding performance of the notated material dictated by the demands of the performance piece.

UNCLASSIFIED	UNCLASSIFIED	PASS	MERIT	DISTINCTION
0-5	6-11	12-14	15-17	18-20
No Attempt and/ or incomplete performance.	Performance Music not convincingly projected.	Some convincing projection of the music.	Mostly convincing projection of the music.	Consistently convincing projection of the music.

With the amount of research into female adolescent voice change constantly growing due to greater interest in this subject, it is worth contemplating whether projection should be marked at all considering that a lack of projection often stems from a breathiness in the voice and a lack of closure in the vocal folds. Poole (2022) suggested that vocal exercises might be one way to eradicate breathiness so in this assignment, I will test the efficacy of my own warm up strategy to see if it helps to eliminate breathiness in female adolescent singers.

In this next section, I will discuss my methodology and how this will impact my study.

Methodology

This mixed methods study aimed to test a warm-up strategy for its efficacy at improving breathiness in adolescent females. This research was undertaken with a subjectivist approach as knowledge was based on the subjective experiences of the participants (Preissle and Grant, 2014). As subjectivism is more holistic, this worked well with within the field of singing teaching as often as teachers, we integrate a holistic approach by being empathetic towards our student's needs (Ragan, 2018). Ragan is a trusted figure of authority having been awarded the Van L. Lawrence Fellowship for demonstrating excellence in the singing teaching profession. This research also followed an idealist epistemology as it consisted of multiple viewpoints, using multiple participants for the study (Barnett Page and Thomas, 2009). A hermeneutic approach was used by using semi-structured interviews which allowed me to focus on my participant's experiences (Suddick et al., 2020) and adapt my questions to the needs of the participants.

Primary research using a closed question questionnaire was used to gauge an idea of the current level of knowledge in the subject area of female adolescent voice change. To ensure accuracy in the research, I scrutinised a study by Sale (2022) and implemented their suggestion to engage colleagues with expertise in quantitative data to review my questionnaire before it was distributed. Seeking input from specialist voice teachers provided me with informed responses (Hox and Boeije, 2005) as they had a knowledge of my subject area. I decided to use a specialist social media group to locate participants. The benefits of this were that it helped me to gather quick data and widened the reach of the data to this targeted group of singing teachers (Busetto et al., 2020). Once completed, I undertook secondary research in the form of a literature review and my experiment to improve my own knowledge in the subject area and to fill subject gaps in order to boost my communication and reputation within the industry (Chavarro et al., 2017).

The qualitative part of this mixed methods study allowed me to focus on human experience in the context of singing lessons (Schwandt, 2000) as humans are not one dimensional and all have different emotional needs (Harwood, 2006). A mixed methods approach helped to 'neutralise the weaknesses of both qualitative and quantitative methods' (Doyle et al., 2009:178). Limitations of quantitative studies are that the data could be seen to lack evidence for why people think in certain ways (Goertzen, 2017) however the qualitative element of my semi-structured interviews allowed me to overcome this by exploring my participants feelings (Busetto et al., 2020). Quantitative data allowed for gaining mathematical figures which were easy to present in graphs (Sukamolson,2007). The validity that mixed methods offered from both quantitative and qualitative approaches, allowed me to gain more ideas for further research which will inevitably support my field of work (O'Cathain et al., 2010; McKim, 2015).

Purposive sampling was used to find two case study participants. Participants were two singing teachers and their adolescent female students who suffered from breathiness in their singing lessons on a weekly basis. Purposive sampling seemed like the obvious option due to its convenience (Acharya et al., 2013) however in order to guarantee precision, it was important for me to understand my role as an inside researcher throughout this study. My study fell into the category of intimate insider research (Mercer, 2007) as I was well known to my participants before my investigation will begin. I reduced the risk of bias by picking participants who I was not closely connected to as great familiarity can often cause a loss of objectivity within research (Unluer, 2012). In order to ensure validity, my participants had not spoken to me for at least 5 years, and I never met their students. I was conscious that there were possibilities of participants 'tempering the truth as professional relationships may continue between us once the research is complete' (Preedy and Riches, 1988: 221).

Once participants had tested the warmup strategy, they participated in one-to-one semi-structured interviews. Semi-structured interviews allow for the participants and interviewer to be interactive. This then causes unexpected topics to occur and, in the process, overcomes researcher bias (Busetto et al., 2020). Insider researchers are stereotypically passionate about their topic of study (Saidin, 2016) and I was aware throughout the process, that I am very passionate about the topic of female adolescent voice change. I had to be mindful of the way I phrased and responded to questions during my interviews as I did not want to influence my participants in any way (Leech,2002). This was also part of the reason I picked participants who were not closely linked to me through my places of work as I am quite vocal about my views on this topic and the importance of teaching this age group correctly.

After participants were interviewed, I then coded the information to 'structure my data and make it easily accessible and retrievable' (Linneberg et al., 2019:261). Coding as a system ensured that I revisited any data collected that I may have initially missed and helped me to trigger further analytical ideas (Linneberg et al., 2019). Ultimately, the analysis of these codes will define whether my teaching strategy is successful at eliminating breathiness in adolescent females.

Findings

Questionnaire responses

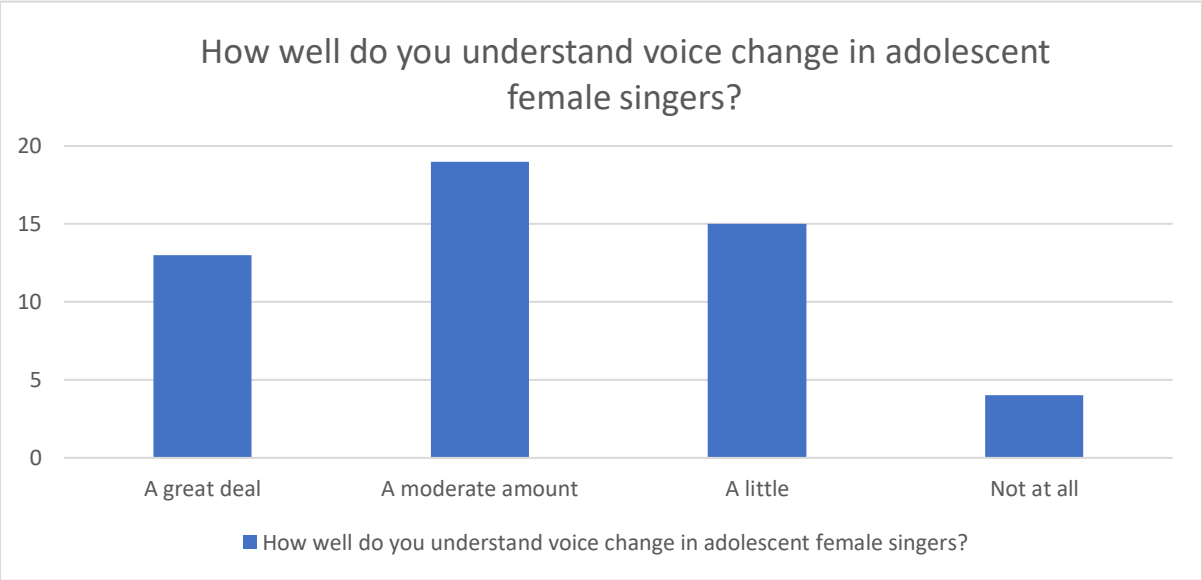
An initial questionnaire was undertaken to understand the singing teacher demographic and their current knowledge level of female adolescent voice change. Closed-ended questions were used to avoid an extensive coding process (Reja et al., 2003) and to give a structured response (Acharya, 2010) however it could be argued that this leaves respondents unable to truly express any ideas that have not been used in the preconceived questionnaire answers (Langley, 2004). The participants (N=51) consisted of singing teachers from across the United Kingdom and USA which reflects a diversity in cultures (Palmer and Burchard, nd). Whilst this figure was not an even number, the number was sufficient, and participants clearly represented my population of interest (singing teachers) which was one of my strategies to reduce error (Ponto, 2015). Any more participants may have led to an inefficient use of my time (Patel et al., 2003).

Figure 3. A table showing the questions asked to participants in my survey.

How well do you understand voice change in adolescent female singers?
Could you discuss the symptoms of adolescent voice change in female singers if asked?
How well do you understand voice change in adolescent female singers?
How well do you feel you were taught about adolescent voice change from your place of study or your own vocal teacher?
Would training in teaching this demographic of student be useful for your teaching practice?
Are there enough resources available to assist teachers in teaching this demographic of student?
Would a teaching resource providing exercises that helped with the symptoms of voice change in adolescent females be useful for your teaching practice?

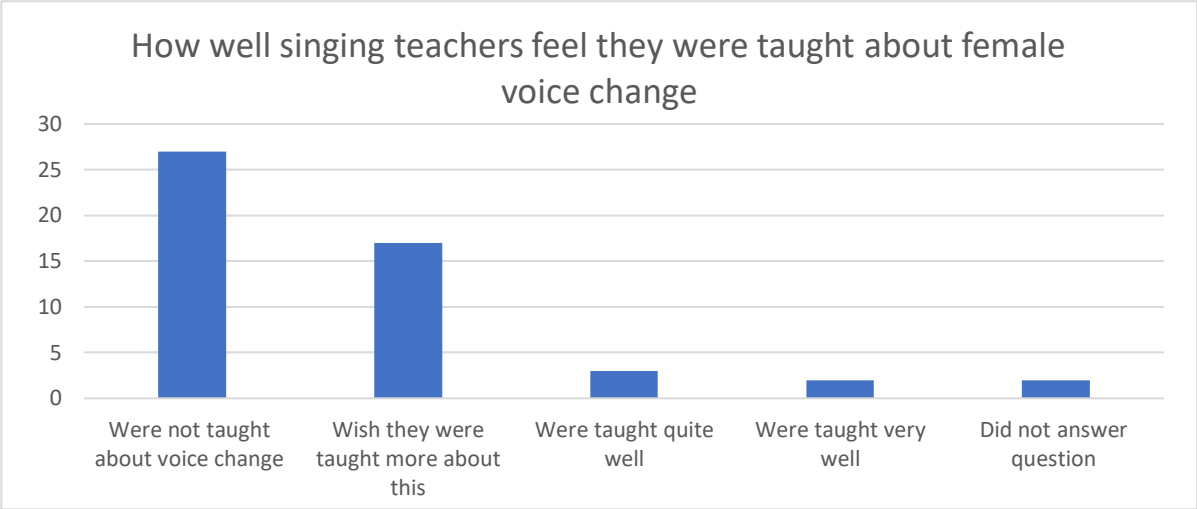
For the first question, participants were asked to rate their knowledge of voice change with the options of a great deal, a moderate amount, a little and not at all. The results of questions have been presented in a table format.

Figure 4. A table showing how well participants understand voice change in adolescent female singers.



When participants were asked if they could discuss the symptoms of voice change in adolescent females, most participants (92.2%) said that they could whilst a small number (7.8%) couldn't which suggests that there are some singing teachers teaching who do not have a full understanding of vocal pedagogy.

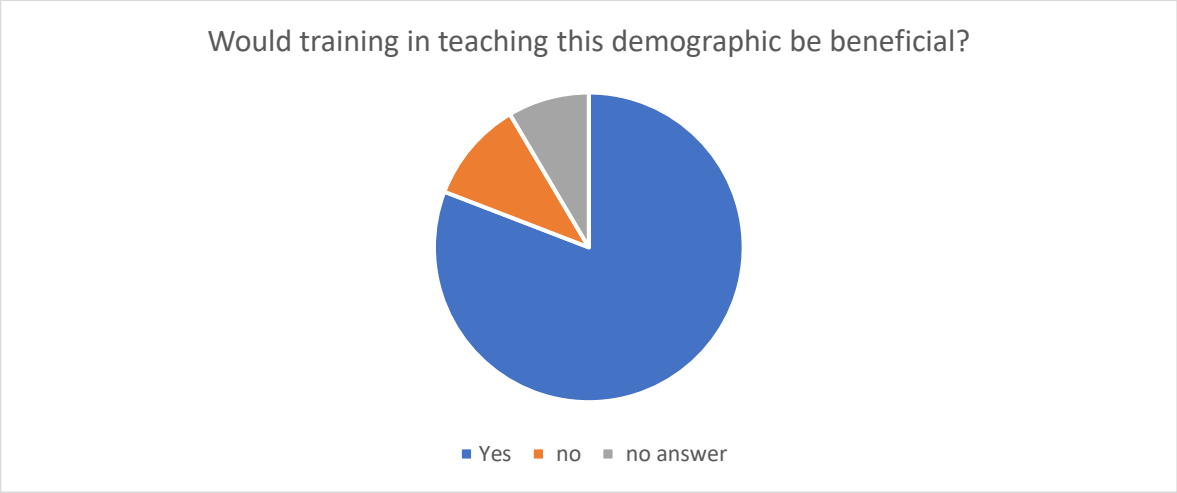
Figure 5: A table showing how well participants felt that they were taught about female voice change.



Having collated the data from this survey, it was clear that despite voice teachers knowing how to describe symptoms of voice change in adolescent females, they weren't necessarily taught about this in the most beneficial way. Out of these 51 participants, 27 (52.9%) were not taught about voice change with 17 (33.3%) wishing they were taught more about the subject. This means that there is scope for creating a training resource in this area if my tested warm up strategy proves to work successfully. 5 participants (9.8%) were taught quite well or very well about this topic however in hindsight, this response was quite subjective as different participants may have varying opinions on what is good teaching (Bertrand and Mullainathan, 2001). 37.3% of survey participants only understood this topic a little or not at all which shows that the level of understanding from voice teachers was quite low when the teachers were studying or that the level of information about this topic has improved throughout the years.

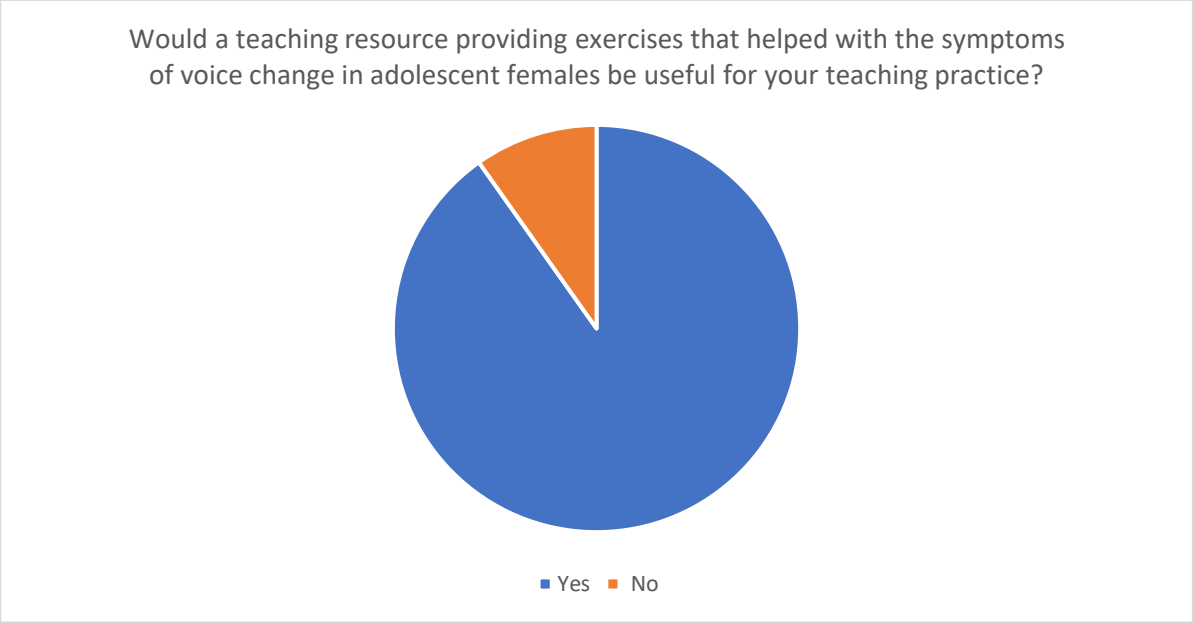
Although many participants stated that they knew the symptoms or had initial knowledge about the topic of voice change in adolescent females, 74.5% of survey participants believed that training in this area would be beneficial with only 9.8% answering no to this question and 72.5% of participants felt that there were not enough resources to help teach this demographic of student.

Figure 6: A table showing whether training in teaching adolescent female voices would be beneficial.



Whilst 9.8% of participants stated that they wouldn't have a need for training in this area, only 3.9% of the participants answered that a teaching resource providing exercises to help with this issue would not be beneficial. The majority (96.1%) said a teaching resource would be useful. It is possible that those who did not answer the question were not aware of their need for this training and this is proven by the fact that those responding 'no' to needing training all answered 'yes' to the following question that a teaching resource would be beneficial. This shows that teachers might still have gaps in their knowledge or understanding of teaching this area or even that these teachers might just not enjoy the process of being trained. It is also possible that participants who answered 'no' to needing training were showing signs of overconfidence in their abilities in order to seem like they were answering correctly. Johnson and Fowler (2011) suggested that many economic models have this assumption that there must be some evolutionary development causing those who are correct to be rewarded.

Figure 7: A table showing whether participants would benefit from a teaching resource providing exercises for those teaching adolescent female singers.



Having evaluated the data from this questionnaire, the results showed that participants found that there was demand for more information on the topic of female adolescent voice change. Participants also suggested that there is a clear need for teacher training and resources for teaching this age group. After reviewing the results of this survey, the next step was for my two case study participants to test the efficacy of my warmup strategy.

Case studies

Two vocal teachers each with more than 15 years of teaching experience tested my teaching resource over a four-week period on a student of their choice who suffered from a 'breathy' tone. Due to the time-constraints of this assignment, it was only possible to test this resource for four weeks in order to give myself time to evaluate the findings. My participants selected the student that they felt was struggling most with breathiness when singing. These students had been cleared of any vocal pathology from medical professionals. There are ethical implications of singing teachers diagnosing breathy tone as neither of the participants were medical professionals themselves (Scearce, 2016), but the participants were otherwise vocally healthy with no signs of vocal pathology. After the four-week process was over, the vocal

teachers participated in semi-structured interviews to answer questions on their experience testing my warmup strategy.

Case study 1 (Participant A)

Participant A has more than 15 years' experience teaching female adolescent singers going through voice change. They teach one to one and whole class singing lessons in independent schools across the West Midlands. Participant A's student is a 14-year-old northern female suffering from an 'overall slightly breathy tone' who 'struggled with this around the passaggio'. Participant A's student has been studying with their teacher for a few years and is quite an active singer.

Case Study 2 (Participant B)

Participant B is a singing teacher and examiner for ABRSM. Participant B has a good understanding of female adolescent voice change having taught this age of student for more than 20 years. Their student is a 12- year- old London-based female who struggles with breathiness in their voice and has been taking voice lessons for the last four years.

Interview Findings

Results were coded (Appendix 6 and 7) for each semi-structured interview. There were four categories of coding: Student's feedback (positive), Students feedback (constructive), Teacher's Feedback (Positive), Teacher's feedback (constructive). After coding, many themes were present, and these have been present below in a table format.

Themes
Ease of use
Enjoyment
Challenged
Effectiveness
Future potential
Visual
Faciliitating

I noticed that some of these themes complimented each other so I grouped them into three categories which made these ideas easier to explore.

Design	Satisfaction	Efficacy
Ease of use	Enjoyment	Effectiveness
Facilitating	Challenged	Future potential
Visual		

Design

Overall, Participant A found the warmup resource easy to use and integrate into lessons however they commented on the technical challenge of the exercises such as her student "struggling as we went up in pitch", "struggling a little bit with the differentiation of the intervals" and that she "struggled to keep her breath going with the vowels because she was a little confused over the vowels" which was "due to her accent". During adolescence, a singer can suffer from inconsistencies in range and discomfort when singing (Haston and Ford, 2007). It is possible that the larger intervals such as the 9th in the lip trills and finger kazoo's might be too challenging for adolescent females so these should be adapted to show a clear progression in range. I thought that I had showed progression in difficulty with the intervals increasing in range but perhaps, I could have given the teachers more clarity in my intentions for these exercises to be progressive as students advanced technically.

Participant A strongly believed that not everyone "gets on" with Italianate vowels. From my own knowledge of teaching within my vocal studio and knowledge I have gained from Aura et al. (2022) and Dromey et al. (2011), I deduced that moving between vowels can be quite useful for increasing resonance and focussing sound. Either Participant A was allowing their own opinions and bias to affect the way that they taught the exercise (Slonim, 2013) or perhaps there were gaps in my own research and vowel exercises should be adjusted depending on the student's accent. It is possible that these could be a challenge for participants A's Northern student, as a Northern accent differs greatly from the Italianate vowels in classical singing as it favours shorter vowels (Williams, 2014).

Participant A also commented on the issue of time saying that in week one, they "ran through all of the exercises, and saw what she coped with well, and what she didn't take to as well" Week two, they "chose the ones that worked" as they only have a 45-minute lesson on Zoom. They "chose the three or four exercises from the whole group of them that worked best for her" in the order that I had set the exercises. It is worth thinking about whether this resource would be more effective using a smaller number of exercises in a repetitive way or whether the exercises should be interchangeable.

Participant B's student commented on the visual nature of the resource saying, "it's fun to see", and it is possible that this could help visual learners as well as those kinaesthetic learners who learn more physically. McCarthy (1981) pioneered research into learning styles identifying that there were three main types of learning styles: visual, auditory and kinaesthetic. Despite singing training traditionally being taught in an auditory way, society is becoming more visually oriented, and singers are more visually aware nowadays (Callaghan et al., 2004). With both teachers and students in my study commenting on this, it is possible that the visual element of my study helped contribute to its success. Participant B in particular "loved that (they) could show the pupil and say this is what it looks like." They said that because the resource was "fun to see", their pupil "definitely enjoyed this more easily than if it's from (their) notes". A study by Tripp et al. (2007) found that most of their participants were visual learners and advised that learning styles should be considered to improve learning. Further to this, visual learning is particularly useful with SEND students as it can help them to learn in a more effective way (Schneps et al., 2007). This means that the visual elements of my study may contribute to my study being more inclusive to those with additional learning needs.

Satisfaction

Participant A's student seemed to find the exercises challenging, but results showed that they "enjoyed the challenge". Having a growth mindset and taking on challenges increases satisfaction in learning (Dweck, 2015; Kondratowicz and Godlewska-Werner,2022). A teacher's attitude is important to guaranteeing student success and there is no way of knowing whether the participants were encouraging their students through their difficulties or whether they were teaching them with a fixed mindset (Dweck, date unknown).

I found Participant A's attitude quite challenging during the interview process as it seemed that they had very strong opinions, consistently commenting that musical theatre singers "just wouldn't get on" with the Italianate vowels as "not everyone gets on with them". She was reluctant to agree despite me attempting to explain that I wouldn't expect a musical theatre student to sing with Italianate vowels but unfortunately, she did not seem receptive to my knowledge on the subject. This was an area for improvement in the research process as I found it hard to maintain neutrality and not let my feelings get in the way of Participant A's attitude (Zhang and Okazawa, 2022).

Participant B's "only had positive things to say" about trialling this resource and "loved it so much that (they) ended up using it for other pupils too". Participant B found that the resource was "really good that you could tailor it for each individual pupil" and found the level of difficulty to be just right enjoying the "different levels of difficulty". As teachers, it is important that we

modify our teaching style to suit each student as no one student is the same (Mcduffie et al.,. 2011).

Efficacy

It is interesting that the Participant A's student noticed the changes in their own voice throughout the study commenting that they felt their voice was more "together", "less breathy" and that their "breath lasted for longer" throughout the process. From a validity point of view, this highlights the efficacy in my teaching strategy as the participant's opinions may have been based on what they thought I wanted to hear as the researcher which may 'bias verbal responses' (Norenzayan and Schwarz, 1998).

The exercises had a positive short-term effect on the breathiness in Participant A's student's voice. Ultimately, their student made progress with the resource as exercises showed "a marked difference in air-flow and breathiness" and Participant A would continue to use this resource with their student. From a success point of view, Participant B said that there were "improvements to their student's airflow".

As teachers of western voices, we aim for our students to sing with efficient phonation and a glottal configuration that isn't pressed or breathy (Gaskill and Erickson, 2008). SOVT exercises seen in my warmup strategy such as the finger buzzes and lip trills have been found to encourage consistent breath flow (Titze, 2006). There is increasing evidence that SOVT exercises can help with vocal efficiency and the ease of phonation (Duke et al., 2015). In singing, a 'low subglottic pressure with a high glottal flow can cause breathiness' (Proutskova et al., 2013:2). A balanced airflow is necessary when developing a healthy singing voice (Radionoff, 2008) so the fact that both students and teachers participating in this study could hear a difference in this area suggests that my teaching strategy would help encourage a healthy singing technique for those using it and help with improving phonation.

Future developmental ideas

Both participants commented on their need for a resource such as mine for their teaching studio with Participant A suggesting that "it would be great to have a kind of Bible of exercises and reasons why they help with things vocally" and Participant B advocating the need of a resource by observing that "it's just good to have all of these exercises in one place". This compliments the quantitative portion of my research where many participants (96.1%) said a teaching resource would be useful. Participant B developed this idea further by proposing that I should "release a book" and that they would "love for (me) to do something similar for boys

changing voices too". These exercises could help with male adolescent voices too but this should be tested before use.

Conclusions and suggestions for further study

Historically, there has been a lack of research and resources to support teachers who teach adolescent female voices. This study aimed to test the efficacy of a warmup strategy and how it could benefit my own teaching studio as well as the wider voice teaching community. By testing my warmup strategy, this study established that there are clear short-term benefits to using these warmups and that the strategy is efficient in improving breathiness and overall air flow in adolescent female singers.

Initially, I set out to deepen my own knowledge of teaching this demographic of singers which has been a success as my confidence and understanding in this area has improved. This study shows that whilst there is a clear correlation between breathiness and tone, breathiness and therefore projection in adolescent female singers is a developmental issue that should be considered in performance contexts.

Future research into this subject area should focus on the longer- term effects on using this warmup strategy and whether breathiness can be fully eradicated in adolescent female singers. This study could also be expanded to test its efficacy on adolescent males. Further research should be undertaken into the effect of accents on singing and the impact of accents on vowel positioning and resonance in adolescent singers. Additional action should be taken to ensure that those teaching singing have a deeper understanding of this subject area. This researcher proposes that those marking the performance of adolescent singers should be educated in this subject area fully in order to avoid any inaccuracies in the understanding of adolescent development and the technical issues that may occur during this time.

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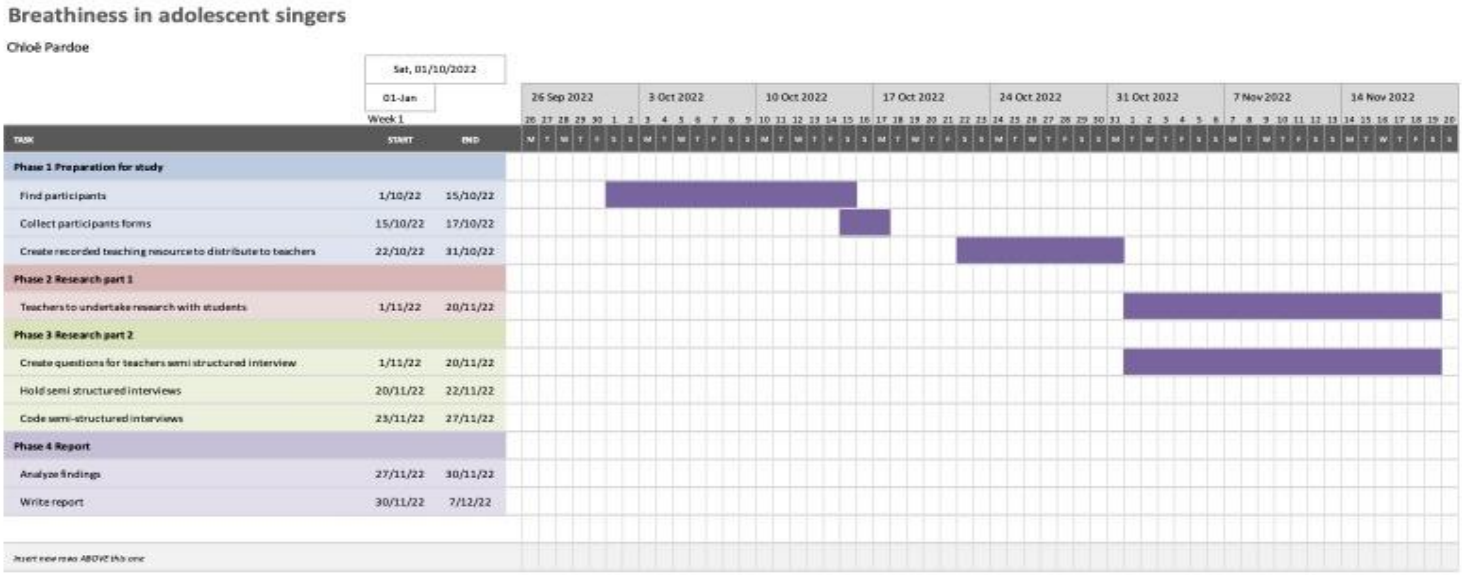
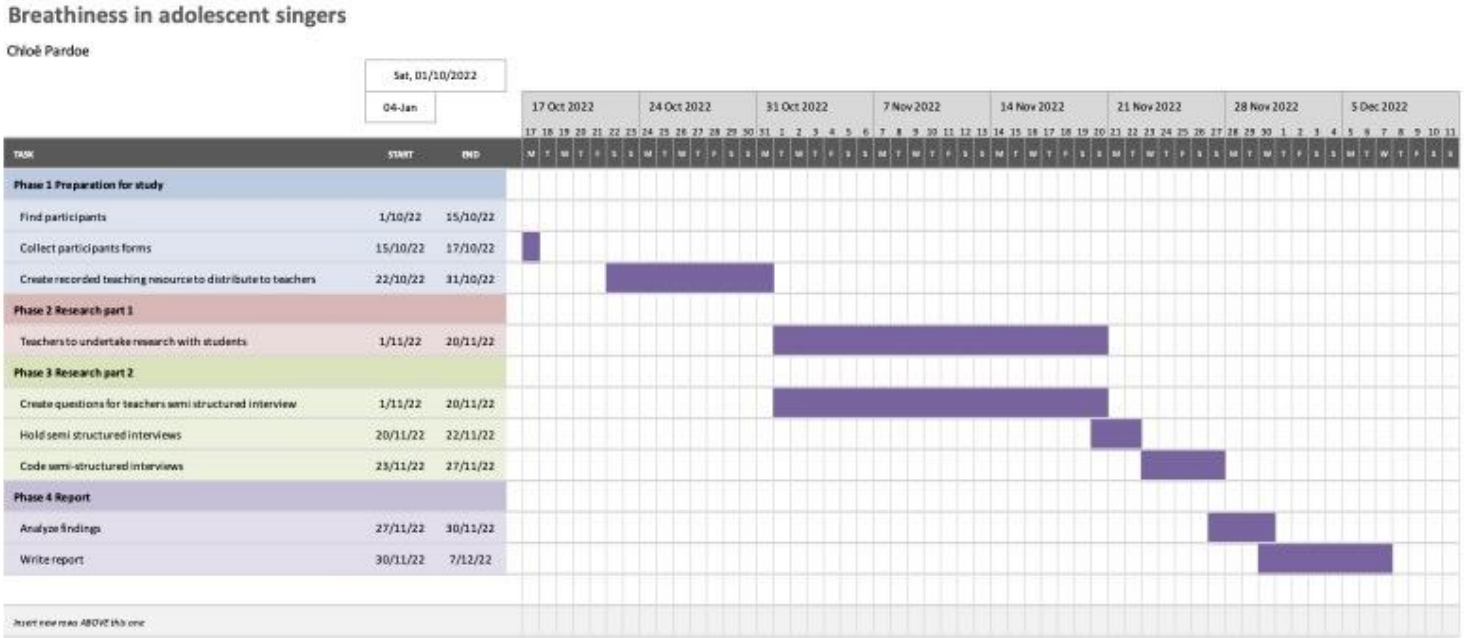
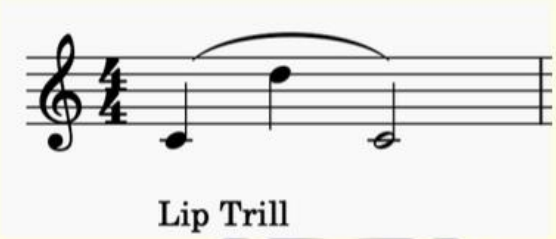
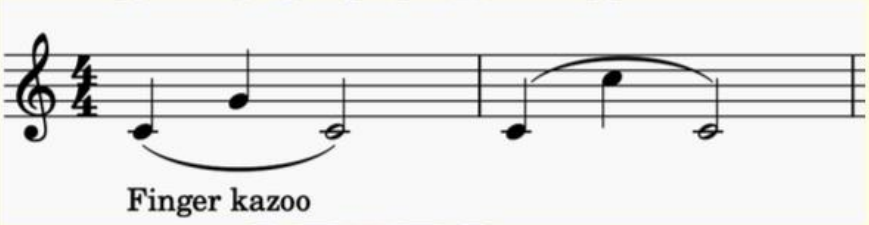
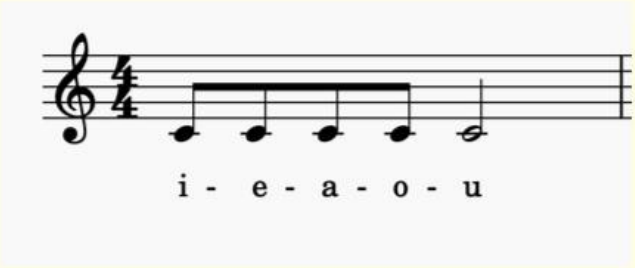
Appendix A- GANTT Chart





Appendix 2- Warmup Strategy

Pardoe Voice Studio Warmups

Lip trills	With closed lips, blow air out to create a lip trill and slide up and down a 9th. If the student struggles with lip trills, substitute with a hum. 
Finger kazoo	With the index finger in front of your lips, produce a sounding blow without puffy cheeks. At first, buzz around on a glide to find the sound and then tailor this to more detailed slides of a 5th. To increase difficulty, slide up and down an 8ve. 
Moving through the Italianate vowels on a sustained pitch	On a sustained pitch, move through the vowels /i/e/a/o/u/ in a legato manner. Try to refrain from starting on the /a/ vowel as the /i/ works best for onset in this exercise. 

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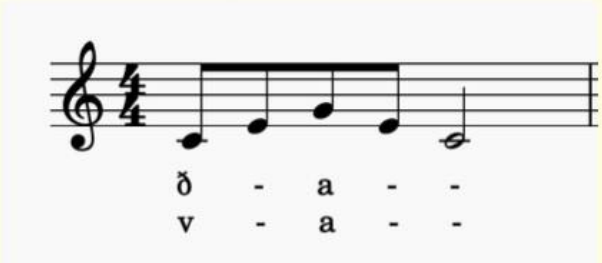
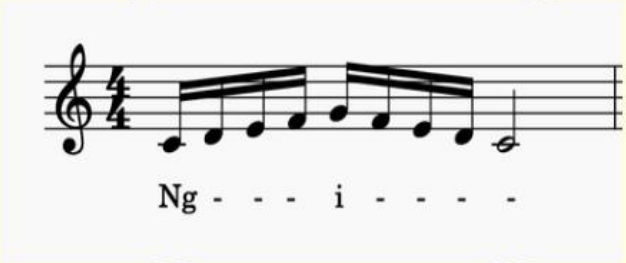
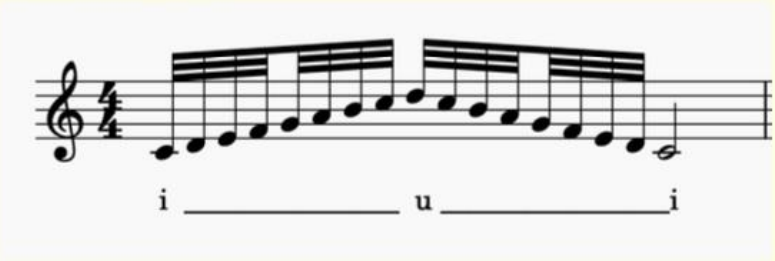
Voiced fricatives	On a /v/ or /ð/ sound, slide up on a broken chord opening to an Italian /a/ vowel at the top. Ensure that the sliding is legato so that the /a/ vowel is connected to the previous notes. 
Nasal sounds moving to an /i/ vowel	Starting on an /ng/ nasal sound, start to sing an ascending scale and eventually change the vowel to an /i/. Ensure that student has a relaxed /i/ vowel and that it is not too wide. 
Coloratura exercise gliding between /i/ and /u/ vowels.	Starting on an /i/ vowel, sing a scale of a 9th opening to an /u/ on the top note. Return to /i/ at the end. This will take some getting used to but these vowels will help to focus the sound. Once this has been completed successfully, try to change the vowel from an /i/ to an /a/ or opening up on the top note from the /u/ to an /a/ to create a more focussed /a/ vowel. 

PARDOE VOICE STUDIO

Appendix 3- Project information sheet for participants

A PRACTICAL STUDY INTO TEACHING PROJECTION IN ADOLESCENT FEMALE VOICES

Purpose of the study

- To understand the barriers that adolescent female singers might face when projecting their voices
- To understand the barriers that voice teachers might face when teaching adolescent females projection
- To test the efficacy of the teaching strategy and see whether it might help the wider voice teaching community

The study

This study will take place over the course of a four-week period commencing on 17th October and concluding on 14thst November. Prior to the study, participants will receive a pdf of the warmup strategy and a video recording of how to teach these exercises. Once this has taken place, the teachers will test the warmup strategy in the setting of a one-to-one singing lesson during every lesson for the four-week period. Once the four-week study is complete, participants will partake in a one-on-one interview with the researcher sharing their experiences.

For more information about this study, please contact _____

Appendix 4- Participant consent form

CONSENT TO TAKE PART IN RESEARCH

A practical study into teaching projection in adolescent female voices

- I ……. voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that the participation involves an interview towards the end of the study.
- I understand that I will not benefit directly from participating in this research.
- I agree to my interview being recorded via zoom.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research, my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.

- I understand that disguised extracts from my interview may be quoted in a report and the researcher's presentation as part of their university degree. Should the results of this study be worthy of publishing, I agree to this information being published.

- I understand that if I inform the researcher that myself or someone else is at risk of harm, they may have to report this to the relevant authorities- they will discuss this with me first but may be required to report with or without my permission.

- I understand that signed consent forms and original recordings from interviews will be retained in a private database by the researcher and they will be the only person with access to this data until the exam board confirms the results of the researchers' report.

- I understand that a transcription of my interview in which all identifying information has been removed will be retained until the exam board confirms the results of the researchers' report.

- I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.

- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Researcher- Chloë Pardoe (insert email address here)

…….… …….

Signature of participant Date

Appendix 5- Transcription of interviews

Interview Subject 1 21/11/22 6:30pm

Interviewer:

Hello. Thank you so much for taking the time out of your evening to answer these questions. I am just going to put the record on and then we shall begin. I've just got a few questions for you today, based around the study that you've been trialling. This will just be a nice informal chat. We will go through the questions but do feel free to elaborate further if you feel like you want to. The first thing I would like to ask is what do you think has gone well whilst using the teaching strategy?

Participant A:

So, she, my student, (blank) she has an overall slightly breathy tone, and has struggled with this, especially around the passaggio which is obviously shifting anyway. And with some of the exercises I've been doing with her some work, and some don't, with my own exercises. With these exercises trialled, she enjoyed the challenge. And she was enthusiastic about it. And over the weeks she made progress, especially with the ng-e she really took to that exercise, especially. And when I say to make progress, there was a reduced flow, a reduced release of the air, and a slower airflow, which was good to see.

Interviewer:

Fantastic. And is there anything that you felt could have been improved with the strategy? Are there any exercises that you think didn't work as well with your student?

Participant A:

Um, I think she, she enjoyed the challenge of the I think it was the kazoo finger. She enjoyed that one. But struggled as we went up in pitch. So as a challenge, in this week just gone, we did kind of going up to eighths and going up to ninths. And she was struggling a little bit with the differentiation of the intervals. A little. But with the repetition, week one and week two, she found that one to be enjoyable, and it helped.

Interviewer:

Fantastic. And then going on to the video, was the video resource helpful in addition to the PDF resource?

Participant A:

I think yeah, I think you doubled down with it. And it was very clear. It was clear what you intended. And it helped me to teach the exercises.

Interviewer:

Brilliant. Have you noticed any improvements with your student's breathiness since using this strategy. I know you briefly touched on that before.

Participant A:

Yes. So especially with the ng-ee she was enjoying that. In fact, she gave me a comment.

Interviewer:

What was her comment?

Participant A:

Here comment was that 'I can feel my throat coming together.' And I said, 'Well, do you? What do you mean by that?' Because I always talked to her about her vocal folds, and how we try to with a glottal, we're trying to put them together and stretch through the larynx. But she said, 'I can actually feel much more together'. And I said, 'Well, what do you mean by that?' And she said, just 'I feel like it's less breathy and my breath lasted for longer.'

Interviewer:

Which I think if you're singing in a correct way, you will feel that that lack of breathiness so maybe she was trying to describe that? Was this a challenge to integrate into what you already do in lessons with your student?

Participant A:

No, not really. Your final exercise is that the e to u . I do something very similar with e to ah so she was familiar with that. That kind of thing we do little exercises at the beginning of our lessons anyway. So it wasn't totally alien to her. And it wasn't totally alien for me.

Interviewer:

That's good. And would you continue using this? Having used it for a few lessons now?

Participant A:

Yes. I certainly think the the closed sound ng opening on the top with the ee. I think I will, if you don't mind. And I think with some of my more advanced singers, who are still female adolescents

who are in transition, you know, going through voice change. Yes, I would probably then use the Italianate vows. Definitely. Yeah.

Interviewer:

Yeah. Fantastic. And is this something you'd recommend to other people? So other singing teachers?

Participant A:

Yes, yeah, I think a number of the exercises actually really showed a marked difference. So yes, I would recommend them.

Interviewer:

Having trialled this, is it something if you didn't have it that you would be interested in paying for as a resource?

Participant A:

Um, yes. Potentially. Yeah.

Interviewer:

Good. That's something I'm looking into- if there's a market for that. I have found that there's a lack of resources to help with this area with students.

Participant A:

Yeah, I do. I do think that and the things that I have learned to have been on courses, or through my own singing teacher, or, you know, experience, so it would be great to have a kind of Bible of exercises and reasons why they which things they help with vocally.

Interviewer:

Fantastic. I'm more than happy for you to continue using this resource. But I'm just thinking for other singing teachers in that sense. Do you have anything else that you would like to add in terms of this, this resource, anything that your student may have commented on? I know, she said, obviously, about the E-U, but were there any other comments that she made about her breathiness?

Participant A:

Um, I think she, we tried the Italianate vows. And she struggled a little. She's from up north and she has a very broad northern accent. And we haven't really done a lot of work with those vowels. Because she's on some of the lower grades for the time being. So she said this was last week. Yes, she said she, she actually said and I quoted, she struggled to keep her breath going with the vowels because she was a little confused over the vowels, that's all. But that was just because I kept trying to help her with the shaping of the vowels. So just as feedback , not everybody gets on with Italianate vows, I suppose as musical theatre singers just wouldn't get on with them.

Interviewer:

Yes obviously with the musical theatre sound, it's slightly more open but these particular exercises, I guess, weren't, weren't created to fit in with any specific technique but more as a way of developing the technique through the exercises first, and then obviously, seeing if this helps with breathiness before singing repertoire. So, going between the vowels, I found, through the research that I was doing, it just helped to keep everything quite focused in terms of the sound and airflow. Yeah, so that's, that's where that exercise came in.

Participant A:

I would use that with several my adolescent female singers, but just in particular with this one, she is more musical theatre and struggled just because of her own vowel shapes for her for her dialect accent.

Interviewer:

That's really helpful to hear, actually. How did you find the kind of order of the exercises? Did you find that in terms of the progression, it worked? In the order? Or would you juggle any around?

Participant A:

yes, So week one, I ran through all of the exercises, and saw what she coped with well, and what she didn't take to as well. And week two, I must confess, I then chose the ones that worked as we only have a 45 minute lesson on Zoom. So I just chose the three or four exercises from the whole group of them that worked best for her in the order that you've set them both.

Interviewer:

Out of curiosity what were the four exercises that you found worked?

Participant A:

The ng-e, I-U and and then there was another sorry? Oh, the lip trills? Yes, the literal so we started with the lip trills. And we do those anyway in our lessons. So we'd usually do like a an ascending and descending fifth lip trail. So she was quite used to that. She struggled a little bit with the ninth.

Interviewer:

the ninth was intended for more advanced students, I think younger ones would, would really struggle with that, wouldn't they? So in terms of findings, it's a bit of an awkward interval to do.

Participant A:

But she did find it. When we did the IE up to obviously that's going up to a ninth. Yeah. So I showed her that one and said, 'This is a ninth', and then she was able to find the ninth.

Interviewer:

That's really helpful to know, actually, that you can kind of refer back and forth. I mean, I know I said that ideally it was going to be chronological, but obviously in a in the space of a lesson. I was hoping that going forward, these are very much kind of picking what works, and then using that in a repetitive way with the students. So that's great. Yes. And thank you. I think that all of my questions were answered, but if you have anything else that you think you'd like to add?

Participant A:

Nope, I think I think you've covered it all.

Interviewer:

Right. In that case, I will stop the recording.

Interview Subject 2 23/11/22 6:30pm

Interviewer:

Hi, thank you so much for doing this today. I'm just going to go through some questions with you. It's very informal. So please answer as honestly as possible. What do you think has gone well using the teaching strategy?

Subject 2:

Everything has gone great.

Interviewer:

Are you able to elaborate on that?

Subject 2:

I am. I can do. I thought that it was really good that you could tailor it for each individual pupil. I loved it so much that I ended up using it for other pupils too. I'm not sure if I was meant to do that. And yeah, I like that. There's different levels of difficulty. So maybe the first week, you keep it simpler, and then you can move on, and make it more challenging as you go through.

Interviewer:

That's great that you found it so useful. What do you think could be improved with the teaching strategy?

Subject 2:

That's a bit of a long silence, because I can't immediately think of anything.

Interviewer:

That's fine.

Subject 2:

I think maybe more of them. I would like more of them. Okay. I only have positive things to say as they were wonderful.

Interviewer:

Was the video helpful, in addition to the PDF resource?

Subject 2:

Yes, definitely. Maybe one thing that might be helpful for some teachers, is maybe suggestions of different ranges for different voice types. And maybe, because I love that they're all written on C and I loved that I could show the pupil and say, this is what it looks like. And because it's fun to see, they definitely enjoyed this more easily than if it's from my notes. Just every voice is different. But just know I love the resource. But you know, with the sopranos you don't necessarily want to start with C each time.

Interviewer:

Yeah, you might want to start slightly higher.

Subject 2:

I think you could give a kind of rough estimation for where to start. But that might be brilliant, because then you can then you can just find yourself and you know, the teenagers can understand that as well.

Interviewer:

Yes, I love that idea thank you. Have you noticed any improvements in your students breathiness since using this strategy?

Subject 2:

It's hard to say in such a short time as I would rather have months with it, not weeks but yeah, I would say there were improvements to the breath flow. But I would think probably it would do, although that's obviously not evidence based. That's just my feeling. Because, you know things like the vvs and buzzes and all of that are going to help with breathiness. So I think it’s just good to have all of these exercises in one place.

Interviewer:

Have you had any feedback from any of the students regarding their voices? As they were doing the exercises?

Subject 2:

I get a lot of feedback everywhere, because they'll always say, I've got a sore throat or this doesn't feel good, or this does feel good, which is nice. Yeah, usually only the ones that have the bigger ranges. They said, This doesn't feel good. You know, they're having a bad week. But I like from like, number three onwards, I like that they don't, that they don't cover a massive range apart from the last one which is done more gradually. Yeah, I think they felt very comfortable with them. The student really enjoyed doing these in their lessons and found them fun whilst still mentally stimulating.

Interviewer:

was this a challenge to integrate into what they already do in lessons?

Subject 2:

No. Because obviously, we'd always do some warmups. And actually, it's really nice to mix it up a bit. That's why I think it would be good if I had even more of your exercises.

Interviewer:

Would you continue using this having used it for a few lessons?

Subject 2:

Yes, definitely. I would like more please.

Interviewer:

Is this something you would recommend to other people?

Subject 2:

Definitely. I think you should release a book. Honestly, I think you should release these as a book.

Interviewer:

Yes, my next question was now that you have trialled this, is this something that either you as a teacher or you think other people would pay for?

Subject 2:

(With enthusiasm) Yeah, so yes, definitely.

Interviewer:

And do you have anything else you'd like to add?

Subject 2:

Thank you for including me, I really loved it. I'd love for you to do something similar for boys changing voices too.

Interviewer:

Hopefully, these exercises should work with both really. In terms of changing voices for boys, we would obviously keep the range to a shorter range. I'm going to stop the recording now as I think that is all of the questions answered. Thank you for your time.

Appendix 6 Interview 1 coding

Green- Students feedback (positive)

Red-Student's feedback (constructive)

Blue- Teachers feedback (positive)

Pink- Teachers feedback (constructive)

Green- Students feedback (positive)

She enjoyed the challenge

Enthusiastic

Think she, she enjoyed the challenge of the I think it was the kazoo finger. She enjoyed that one

That 'I can feel my throat coming together

'I can actually feel much more together

I feel like it's less breathy and my breath lasted for longer

It wasn't totally alien to her

THEMES- Enjoyment, challenged, effectiveness, ease of use

Red-Student's feedback (constructive)

But struggled as we went up in pitch (kazoo)

was struggling a little bit with the differentiation of the intervals.

we tried the Italianate vows. And she struggled a little.(due to accent)

, she struggled to keep her breath going with the vowels because she was a little confused over the vowels

Struggled just because of her own vowel shapes for her for her dialect accent.

She struggled a little bit with the ninth.

THEMES- Pitch, intervals, vowels

Blue- Teachers feedback (positive)

she made progress, especially with the ng-e

reduced flow, a reduced release of the air, and a slower airflow, which was good to see.

it was very clear. It was clear what you intended. And it helped me to teach the exercises.

It wasn't a challenge to incorporate. It wasn't totally alien for me.

With some of my more advanced singers, who are still female adolescents who are in transition, you know, going through voice change. Yes, I would probably then use the Italianate vows.

, I think a number of the exercises actually really showed a marked difference. So yes, I would recommend them.

it would be great to have a kind of Bible of exercises and reasons why they which things they help with vocally

THEMES- Effectiveness, Ease of use, Future potential

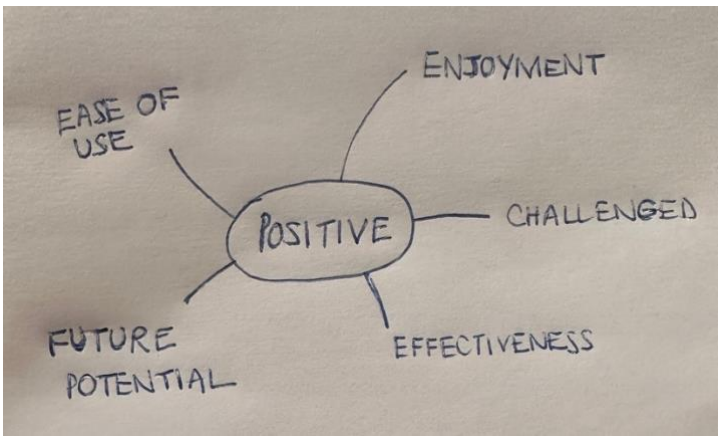
Pink- Teachers feedback (constructive)

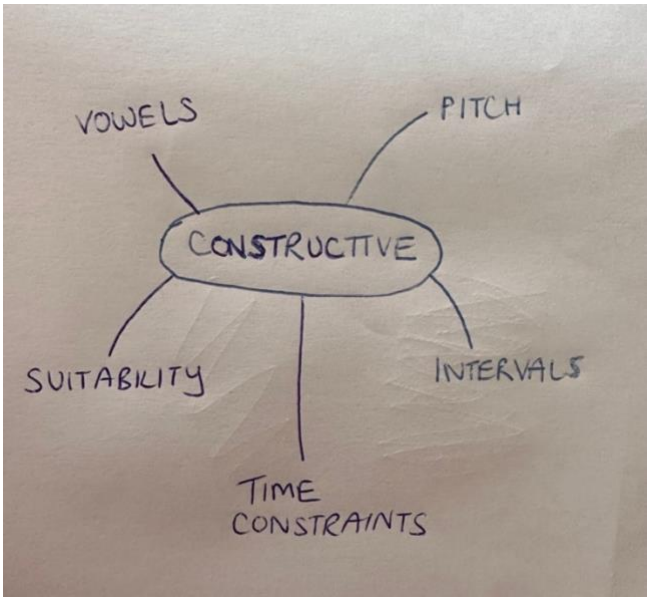
Not everybody gets on with Italianate vows, I suppose

I then chose the ones that worked as we only have a 45 minute lesson on Zoom

THEMES- Suitability, time constraints

Themes for Interview 1





Appendix 7- Interview 2 coding

Green- Students feedback (positive)

It’s fun to see

They definitely enjoyed this more easily than if it's from my notes

they felt very comfortable with them

really enjoyed doing these in their lessons and found them fun whilst still mentally stimulating.

Themes: Visual, Enjoyment, Challenged

Blue- Teachers feedback (positive)

Everything has gone great.

Was really good that you could tailor it for each individual pupil.

I loved it so much that I ended up using it for other pupils too

There's different levels of difficulty

I would like more of them

I only have positive things to say as they were wonderful.

Visual resources were useful

I love the resource

I would say there were improvements to the breath flow.

I think it’s just good to have all of these exercises in one place.

t's really nice to mix it up a bit. That's why I think it would be good if I had even more of your exercises.

Definitely. I think you should release a book

I’d love for you to do something similar for boys changing voices too.

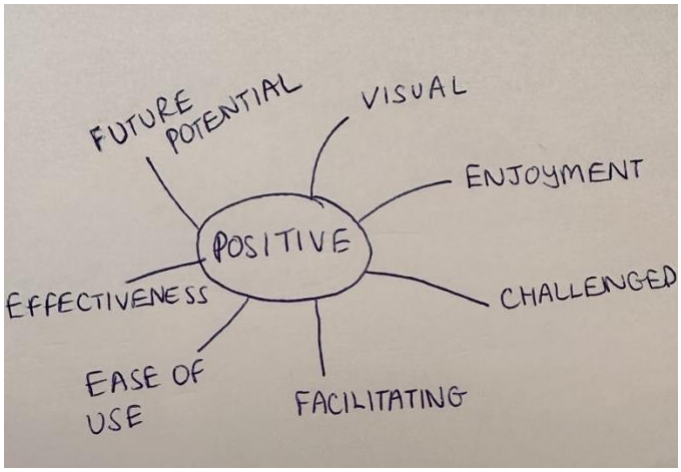
Themes: Facilitating, Challenged, Future potential, Visual, Effectiveness, Ease of use

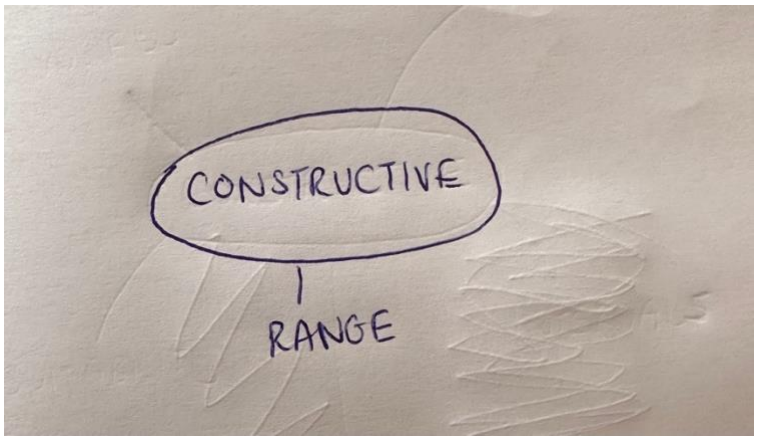
Pink- Teachers feedback (constructive)

is maybe suggestions of different ranges for different voice types

I would rather have months with it, not

Yeah, usually only the ones that have the bigger ranges. They said, This doesn't feel good





A table showing the similarities and differences between participants responses.

Similarities	Differences
Both students felt that their breathiness improved	Participant A struggled to teach all the exercises within one lesson
Both teachers heard a reduction in air flow resulting in less breathiness	Participant A did not find that Italianate vowels worked for the student used in the study
Both students and teachers enjoyed the exercises	Participant B found that the study was too short
Both teachers wanted to continue with the exercises after the study was over	Participant B would have preferred to see the ranges instead of the exercises all starting on middle C
Both teachers found the visual element worked well	

Appendix 8- Completed Ethics Form

Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

PG2 / E1 FORM

APPLICATION FOR ETHICAL APPROVAL

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

Delete the Guidance Notes at the end of the form BEFORE submitting your application

SECTION A: About You (Principal Researcher)

1	Full Name:		Chloë Pardoe			
2	Tick all boxes which apply:		Member of staff:	☐	Honorary research fellow:	☐
3	Undergraduate Student	☐	Taught Postgraduate Student	☒	Postgraduate Research Student	☐

4	Institute/Academic Discipline/Centre:	WAPPAR
5	Campus:	Carmarthen
6	E-mail address:	chloepardoemezzo@gmail.com
7	Contact Telephone Number:	07703984970
	For students:	
8	Student Number:	1711054
9	Programme of Study:	MA in Professional Practice (Voice Pedagogy)
10	Director of Studies/Supervisor:	Louise Emanuel Debbie Winter

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)		YES ☒	NO ☐	
					Date
2	If Yes, please indicate source of approval (and date where known): ***Approval in principle must be obtained from the relevant source prior to seeking ethical approval***	Research Degrees Committee	☐		
3		Institute Research Committee	☐		
4		Other (write in) WAPPAR Ethics Board Representative	☒		

SECTION C: Internal and External Ethical Guidance Materials

	Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines.	
1	**UWTSD Research Ethics & Integrity Code of Practice**	☒
2	**UWTSD Research Data Management Policy**	☒
3		☐

SECTION D: External Collaborative Research Activity

1	Does the research activity involve collaborators outside of the University?		YES	☐	NO	☒
2	If Yes, please provide the name of the external organisation and name and contact details for the main contact person and confirmation this person has consented to their personal data being shared.as part of this collaboration.					
3	Institution					
4	Contact person name					
5	Contact person e-mail address					
6	Has this individual consented to sharing their details on this form?		YES	☐	NO	☐
7	Are you in receipt of a KESS scholarship?		YES	☐	NO	☐
8	Is your research externally funded		YES	☐	NO	☐
9	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Voluntary	YES	☐	NO	☐
10		Employed	YES	☐	NO	☐
11	Is the research being undertaken within an existing UWTSD Athrofa Professional Learning Partnership (APLP)	If YES then the permission question below does not need to be answered.	YES	☐	NO	☐
12	Permission to undertake the research has been provided by the partner organisation	(If YES attach copy) If NO the application cannot continue	YES	☐	NO	☐

Where research activity is carried out in collaboration with an external organisation

13	Does this organisation have its own ethics approval system?	**YES**	☐	**NO**	☐
14	If ~~Yes~~, please attach a copy of any final approval (or interim approval) from the organisation				

SECTION E: Details of Research Activity

1	Indicative title:	Efficacy of a teaching strategy aimed at improving projection in adolescent female voices.		
2	Proposed start date:	19/09/2022	Proposed end date:	05/01/2023
3	**Introduction to the Research (maximum 300 words)** **Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the three points below:** • *Purpose of Research Activity* • *Proposed Research Question* • *Aims of Research Activity* • *Objectives of Research Activity* Demonstrate, briefly, how **<u>Existing Research</u>** has informed the proposed activity and explain • *What the research activity will add to the body of knowledge* • *How it addresses an area of importance.*			
4	**Purpose of Research Activity** The purpose of this research is to test the efficacy of my teaching strategy that I created in module one. The teaching strategy related to the teaching of female adolescent voices. I am interested to see how this strategy works for other teaching professionals and not just my own students.			
5	**Research Question** A practical study into teaching projection in adolescent female voices.			
6	**Aims of Research Activity** To investigate the efficacy of my teaching strategy			
7	**Objectives of Research Activity** • To understand the barriers that adolescent female singers might face when projecting their voices • To understand the barriers that voice teachers might face when teaching adolescent females projection • To test the efficacy of my teaching strategy created in module one and see whether it might help the wider voice teaching community			
8	**Proposed methods (maximum 600 words)** Provide a brief summary of all the methods that **may** be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed.			
9	Methods 1) Focus Groups- A group of 4-6 female singing students and their teachers will take part in this before testing my teaching strategy. I will invite both groups to share their experiences of vocal projection when singing and any issues that they might face when singing/teaching.			

	2) Questionnaire- I will firstly send out a ~~large scale~~ questionnaire to teaching participants via the internet on the challenges that they face when teaching adolescent female singers. After the students and teachers have finished testing my teaching strategy, I will provide them with a questionnaire that will enable me to structure my interviews. These will be audio recorded. 3) Semi-Structured interviews- I will interview the teachers ~~in regards to~~ their feelings before the project and afterwards using data from the questionnaires. These will be audio recorded. 4) Using data from the above, I will code the responses to the interviews and review the efficacy of my teaching strategy.

10	**Location of research activity** Identify all locations where research activity will take place.
11	Colleagues private teaching practices. All research can be taken online should need be.
12	**Research activity outside of the UK** If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (~~e.g.~~ from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants.
13	N/A

14	Use of documentation not in the public domain: Are any documents **NOT** publicly available?	**NO**	☒
		YES	☐
15	If ~~Yes~~, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with prevailing data protection law of the country in question and England and Wales. *(~~this~~ box should expand as you type)*		

SECTION F: Scope of Research Activity

1	**Will the research activity include:**	**YES**	**NO**
2	Use of a questionnaire or similar research instrument?	☒	☐
3	Use of interviews?	☒	☐
4	Use of diaries?	☐	☒
5	Participant observation with their knowledge?	☐	☒
6	Participant observation without their knowledge?	☐	☒
7	Use of video or audio recording?	☒	☐
8	Access to personal or confidential information without the participants' specific consent?	☐	☒
9	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
10	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
11	Investigation of participants involved in illegal activities?	☐	☒
12	Use of procedures that involve deception?	☐	☒
13	Administration of any substance, agent or placebo?	☐	☒
14	Working with live vertebrate animals?	☐	☒
15	Other primary data collection methods, please explain in this box For example, 'focus ~~groups'~~. Please indicate the type of data collection method(s) in this box and tick the accompany box.	☒	☐

16	Details of any other primary data collection method: Focus Groups		

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

1	**Who are the intended participants:**	**YES**	**NO**
2	Students or staff at the University?	☐	☒
3	Adults (over the age of 18 and competent to give consent)?	☒	☐
4	Vulnerable adults?	☐	☒
5	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☒	☐
6	Prisoners?	☐	☒
7	Young offenders?	☐	☒
8	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
9	People engaged in illegal activities?	☐	☒
10	Others (please identify specifically any group who may be unable to give consent) please indicate here and tick the appropriate box.	☐	☒
11	Other – please indicate here: . (this box should expand as you type)		

12	**Participant numbers and source** Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?	
13	How many participants are expected?	4-6 singing participants 2-4 singing teachers 25+ singing teachers participating in questionnaire
14	Who will the participants be?	Female adolescent singers Singing teaching colleagues working with this age group
15	How will you identify the participants?	I will firstly ask my teaching colleagues to take part and then will ask them to recommend some students suffering from an inability to project their voices. From this, I will then ask for permission from the adolescent female singing student's parents/guardians to participate.

16	**Information for participants:**	YES	NO	N/A
17	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
18	Will you tell participants that their participation is voluntary?	☒	☐	☐
19	Will you obtain written consent for participation?	☒	☐	☐
20	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
21	If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐
22	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
23	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
24	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
25	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
26	If NO to any of above questions, please give an explanation			
27	*(this box should expand as you type)*			

28	**Information for participants:**	YES	NO	N/A
29	Will participants be paid?	☐	☒	☐
30	Is specialist electrical or other equipment to be used with participants?	☒	☐	☐
31	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
32	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
33	If YES to any question, please provide full details			
34	Audio recordings will be made of focus groups and interviews *(this box should expand as you type)*			

SECTION H: Anticipated Risks

1	**Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them.** If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.		
2	**Full risk assessment completed and appended?**	**Yes**	☐
		No	☒
3	**Risks to participants** For example: emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information		
4	Risk to Participant: Participant's may become emotional as they will be discussing personal experiences.	*How will you mitigate the Risk to Participant* I will remind participants that they are in control of what they will share and that it is optional to take part in this study.	

		There may be a slight risk that the topic of adolescent voice change my reveal other adolescent related issues. Withdrawing from the study will be highlighted as an options. Local teen support groups will also be identified and students will be referred on where necessary. The focus of the study will be limited to technical voice issues to mitigate against this minimal risk.
5	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities	
	N/A	
6	**Risks to investigator** For example: personal safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest	
	Risk to Investigator: There is a small risk that the investigator may be judged by colleagues into how they handle the study. Safeguarding risks when dealing with children.	*How will you mitigate the Risk to Investigator:* I will be open with my participants so that they are aware of what is happening at each point in the investigation. I will be aware of the safeguarding procedures with young children and know who to report to should any information be disclosed.
7	**University/institutional risks** For example: adverse publicity, financial loss, data protection	
	Risk to University: GDPR- data protection *(this box should expand as you type)*	Data will be stored securely, and password protected and the study will be conducted in a professional manner. *(this box should expand as you type)*

8	**Disclosure and Barring Service**			
9	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	**YES**	**NO**	**N/A**
10	Does your research require you to hold a current DBS Certificate?	☒	☐	☐

SECTION I: Feedback, Consent and Confidentiality

1	**Feedback** What de-briefing and feedback will be provided to participants, how will this be done and when?
	I will provide all participants with my email address so that they can ask for feedback should they wish.
2	**Informed consent** Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before

	data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation.
	Consent forms will be emailed to participants and must be signed before taking part. Online questionnaires will have a consent tick box before proceeding. *(this box should expand as you type)*
3	**Confidentiality / Anonymity** Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case.
	Participants will not be named. If hosting interviews on zoom, I will ask participants to use a coded name so that they are not revealing any personal information. *(this box should expand as you type)*

SECTION J: Data Protection and Storage

In completing this section refer to the University's Research Data Management Policy and the extensive resources on the University's Research Data Management web pages (http://uwtsd.ac.uk/library/research-data-management/).

1	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?	**YES**	**NO**
	"Personal data" *means any information relating to an identified or identifiable natural person ('data subject'). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.*	☒	☐
2	If YES, provide a description of the data and explain why this data needs to be collected:		
	Audio recordings will be collected so that transcriptions can be made for coding purposes Names, emails of participants and signed consent forms. *(this box should expand as you type)*		
3	Does it involve special category data (as defined by the GDPR)?	**YES**	**NO**
	"Special category data" *means sensitive personal data consisting of information as to the data subjects' –* *(a) racial or ethnic origin,* *(b) political opinions,* *(c) religious beliefs or other beliefs of a similar nature,* *(d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992),* *(e) physical or mental health or condition,* *(f) sexual life,* *(g) genetics,* *(h) biometric data (as used for ID purposes).*	☐	☒
4	If YES, provide a description of the special category data and explain why this data needs to be collected:		
	(this box should expand as you type)		

5	Will the research activity involve storing personal data and/or special category data on one of the following:	**YES**	**NO**

6	Manual files (i.e. in paper form)?	☐	☒
7	University computers?	☐	☒
8	Private company computers?	☐	☒
9	Home or other personal computers?	☐	☒
10	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☒	☐
11	"Cloud" storage or websites?	☒	☐
12	Other – specify:	☐	☐
13	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of password protection, encryption, anonymisation and pseudonymisation:		
	All data will be kept in password protected cloud storage on the company's Office 365 system which will not be shared. Audio/visual data will be transcribed and would be shown to participants to check accuracy of reporting. All participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in the password protected folder. *(this box should expand as you type)*		
14	**All Data Storage**		
15	Will the research activity involve any of the following activities:	**YES**	**NO**
16	Electronic transfer of data in any form?	☒	☐
17	Sharing of data with others at the University?	☒	☐
18	Sharing of data with other organisations?	☐	☒
19	Export of data outside the European Union or importing of data from outside the UK?	☐	☒
20	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
21	Publication of data that might allow identification of individuals?	☐	☒
22	Use of data management system?	☐	☒
23	Data archiving?	☐	☒
24	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and DPA (and/or any international equivalent):		
	Data will be shared with my university tutor when I submit my draft and final copy. All data will be encrypted and kept in password protected cloud storage on the Company's Office 365 system which will not be shared. All participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in the password protected folder. The data will be stored until the completion of the project and then deleted. In accordance with the DPA2018, participants will have the right to ask to see what data is held relating to them, and this data will be deleted immediately if the participant requests this, in which case the data will not be used in the project. *(this box should expand as you type)*		
25	List all who will have access to the data generated by the research activity:		
	Chloë Pardoe		

	(this box should expand as you type)		
26	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	Chloë Pardoe *(this box should expand as you type)*		
27	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.		
	All data will be encrypted and kept in password protected cloud storage on the Company's Office 365 system which will not be shared. The data will be stored until the completion of the project and then deleted. (this box should expand as you type)		
28	Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. (*Most relevant to academic staff)*		
	NA *(this box should expand as you type)*		
29	Confirm that you have read the UWTSD guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	**YES**	☒
		NO	☐
30	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	**YES**	☒
		NO	☐

SECTION K: Declaration

31	The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this ~~application~~ I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/		
	Signature of applicant:	Chloë Pardoe	**Date:** **28/07/22**

For STUDENT Submissions:

32	Director of Studies/Supervisor:	Louise Emanuel	**Date:** **13-9-22**
33	Signature:	Louise Emanuel	

For STAFF Submissions:

34	Academic Director/ Assistant Dean:		**Date:**
35	Signature:		

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed **ALL RELEVANT** sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☒	I have attached a copy of final/interim approval from external organisation (**where appropriate**)
☐	I have attached a full risk assessment (and have NOT completed Section H of this form) (where ~~appropriate) ONLY~~ *TICK IF YOU HAVE* ***ATTACHED A FULL RISK ASSESSMENT***
☒	I understand that it is my responsibility to ensure that the ~~above named~~ research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.
☒	I have deleted the guidance notes before submitting the PG2 for consideration

RESEARCH STUDENTS AND STAFF ONLY
All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk , with the title 'Ethical Approval' followed by your name.
You will be informed of the outcome of your claim by email; ~~therefore~~ it is important that you check your University and personal email accounts regularly.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should ~~submit this~~ form (and receive the outcome) via systems explained to you by the supervisor/module leader.

This form is available electronically from the Academic Office web pages:
https://www.uwtsd.ac.uk/academic-office/appendices-and-forms/

Application Process

All staff research ~~projects~~ and all research students must submit the Ethical Approval Form to the **University Research Ethics Committee** via the Academic Office (pgresearch@uwtsd.ac.uk). Staff research directly in relation to personal study for taught undergraduate or ~~Masters~~ programmes should be submitted via the Institute procedures explained below.

Taught masters and taught undergraduate research Ethical Approval Forms are considered **within Institutes.** Institutes will provide details of the specific processes for this. Where the Ethical issues within any single ethical application are of particular concern the Institute will refer these to the University Research Ethics Committee. Any student activity that involves the collection of primary data needs to undergo Ethical ~~approval.~~ this includes assignment work as well as dissertations.

Notes for guidance in completion of this form

Section A: About You
Please complete all relevant sections

Section B: Approval for research activity
Research proposals must be approved in principle before applying for Ethical Approval. The proposal approval only becomes final when the ethical approval is received.

The process for proposal approval varies according the individual and programme of study:

- Research students, by application on form PG1 to the Research Degrees Committee
- Taught students by review of research proposal within Institutes (Institutes provide specific details of these processes)
- Staff, by agreement by the Academic Director/Assistant Dean

Section C: External Ethical Guidance materials
Many discipline areas are required to operate with the discipline specific codes of research ethics (for example health, psychology, education etc.), any such codes must be ~~listed~~ and you must tick to confirm that you have consulted with these.

Section D: External Collaborative Research Activity
Provide details of the external collaborative partners, where appropriate you might want to submit a copy of the external collaboration agreement with the Ethical Approval Form. If the partner requires the research to be subject to its own internal Ethical approval ~~process~~ then please provide details of that process and a copy of any final (or interim) approvals received from the organisation.

Section E: Details of Research Activity
Remember that the individuals reviewing this Ethical Approval Form may not have seen your research proposal, and also may not be experts in the specific area of your research. The information provided should therefore be jargon free and clearly stated.

Indicative Title: please use the same title as used on the research proposal.

Purpose: ~~the~~ Ethical approval process will want to ensure that the methods you propose are adequate and appropriate to address the research aims and objectives. Excessive additional data collection can be seen as unethical.

Proposed Methods: ~~the~~ Ethical approval process seeks to ensure that you understand the methods that are intended, and that the implementation of those methods will be appropriate and without unnecessary impact on respondents. This section must explain how the methods described will lead to the collection of necessary and sufficient data, but not excessive data. Please be specific.

Location: this needs to mention geographical location and also local situation (for example, within Local Authority Offices in Cardiff, using a private room but close to other individuals). If you are collecting data within an organisational setting then you need to explain the permissions that you have obtained to do this.

Research Activity outside of the UK: please complete this section in detail, and note any guidance you have received. Also describe your own familiarity (or not) with the location that you will be utilising.

Section F: Scope of Research Activity
Please tick ALL of the research activities that might be undertaken. If any additional types of activity are intended then please add an extra box and describe these.

If you have answered no to all questions in F then sections G and I do not need to be completed. Signatures are still required in section K.

Section G: Intended Participants
Please tick all categories that might apply.

Numbers & Source: if you are using a series of different methods or research activities please list numbers for each stage/phase. Be clear about how you will find respondents. Will you use intermediaries, and if so how? How will you ensure compliance with your sampling strategy?

Information for participants: all participants should be appropriately informed about the research, what is expected of them and what will happen to the information that they provide. The Ethical review process does not ask to see this documentation, but requires this to be reviewed and approved by the Director of Studies in the case of research students, the supervisor/module tutor in relation to students on taught programmes and the Academic Director/Assistant Dean in relation to staff research.

Section H: Anticipate Risks
All research carries some level of risk. The answers you provide to questions in this section will be reviewed to ensure that you have an appropriate understanding of the type of risks involved and how you can mitigate against these risks. If you have completed a full risk assessment, as required for example for laboratory work, field work, clinical tests, diving operations, or by a collaborative partner, you may append that to this form. In that case, please tick the box indicating this has been provided. You will not then be required to complete Section H.

Risk to participants Think very carefully about how your actions/questions/discussions might affect the people you are involving as participants. You might identify the risk as small but it would still be a risk. Many types of question have the potential to make respondents less content with their life / job; you need to recognise and try to ameliorate any such effects
If these are business owners, time with you may reduce profit.
In some locations physical risk is very real to both participants and yourself, please consider this.

Risk to you, the researcher Think about where you will meet people, if there are any dangers involved in the location. If you are meeting people as individuals think about using a public place. In general do not visit people in their own homes or remote locations. If you are talking to individuals about certain issues think about how their responses might affect you emotionally. What about the risk of collecting insufficient data?

Risk to the University When undertaking your research, you are acting as a member of the University (student or staff). Professionalism is important, so it is important to be well organised and well prepared. Punctuality, clarity etc. are all part of this. What will you do to ensure this? You must ensure you do not harm the good name of the University in any way and do nothing to undermine the reputation of the research it conducts and sponsors. Upholding high standards of conduct and integrity are vital in this regard. You must also conduct the research in such a way to minimise the potential for claims of negligence made against the University, its researchers and any collaborating individual or organisation. In this respect you should always comply with ethical, legal and professional frameworks, obligations and standards as required by statutory and regulatory authorities, as well as the university's Research Integrity and Ethics Code of Practice. Research misconduct in this respect can take many forms, including:

- fabrication: making up results or other outputs (eg, artefacts) and presenting them as if they were real
- falsification: manipulating research processes or changing or omitting data without good cause
- plagiarism: using other people's material without giving proper credit
- failure to meet ethical, legal and professional obligations: for example failure to declare competing interests; misrepresentation of involvement or authorship; misrepresentation of interests; breach of confidentiality; lack of informed consent; misuse of personal data; and abuse of research subjects or material

- improper dealing with allegations of misconduct: failing to address possible infringements such as attempts to cover up misconduct and reprisals against whistle-blowers

Adverse Outcomes. Think carefully about the possibilities, and cover here

Section I: Feedback, Consent and Confidentiality

Feedback to participants: outline your approach. Will interview transcripts be shared with respondents to check accuracy? Will summaries of questionnaire analysis be made available to respondents in some way? Will an overview report be provided? How and when?

Informed consent: Draft letter / e-mail / or heading (or footer) section of questionnaire must be approved by DoS/supervisor (if research student), supervisor/module tutor if taught student, or Academic Director / Assistant Dean if a member of staff.
Confidentiality/Anonymity. Explain clearly how you will ensure confidentiality and anonymity.

Section J: Data Protection and Storage
Before completing this ~~section~~ it is necessary to read the University's Research Data Management information. The questions that follow are designed to ensure compliance with the Data Protection Act as well as established research protocols.

Many research activities will involve electronic transfer of data and use of data management systems in the summarisation and analysis of data. You will need to explain these in relation to compliance with the Data Protection Act.

Think carefully about who will have access to your data, this will include supervisors and examiners. ~~Also~~ that a thesis will be made available via the University library and the British Library system. If you are seeking an access bar for a period of time after ~~completion~~ then mention it here. If you will provide a copy of your findings, or intend to give a presentation, to a facilitating/ supporting/accessing organisation then explain that in this section. But also think about the general principle of data sharing, as explained in the Research Data Management information.

In terms of storage of data please ensure security, and also mitigate against loss of data.

Section K: Declaration
Ensure the appropriate countersignatures have been provided
Look carefully at the checklist and ensure that you comply with and tick all that are relevant to your research.