

MODULE 6

BMPF 7010

Preparing the Adolescent Female Voice for Musical Theatre Belt: Exploring the Pedagogical
Application of Semi-Occluded Vocal Tract Exercises

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PROJECT PROPOSAL

Context.....	p3
Justification and Intended Impact.....	p3
Outlined Intention.....	p4
Project Timeline.....	p5
Ethics and Insider Research.....	p5
Individual Learning Outcomes.....	p6

PROJECT REPORT

Introduction.....	p8
Literature Review.....	p9
Methodology.....	p13
Ethical Considerations.....	p14
Methods of Data Gathering.....	p14
Findings.....	p18
Finding Consistency in a Changing Voice.....	p18
From Vocal Readiness to Producing Belt with Less Perceived Effort.....	p22
Vocal Readiness.....	p22
Changes in Muscular Tension.....	p24
Changes in Perception of Effort and Breath.....	p25
Transfer into Belt Singing.....	p27
Developing Vocal Awareness and Confidence.....	p30
Designing an Intervention Adolescents Will Use.....	p35
Moving towards a Pedagogical Model.....	p40
Conclusion.....	p42
Bibliography.....	p45
Appendix 1: GANTT chart.....	p50
Appendix 2: Completed Ethics Form.....	p51
Appendix 3: Permission Slips (Company and participant).....	p65
Appendix 4: Link to Video Resource.....	p72
Appendix 5: Predetermined areas of discussion	p73
Appendix 6: Participant Transcripts.....	p74
Appendix 7: Coding document from Delve	p87

PROJECT PROPOSAL

Context

As a singing teacher who works within a private studio and a Performing Arts College, the majority of my work is centred around providing vocal tuition within the Contemporary Commercial Music (CCM) genre and, more specifically, the Musical Theatre (MT) genre. The majority of students are aged between 16 and 19, focusing on contemporary Musical Theatre repertoire and techniques. My personal training and professional work has generally been centred in the field of Classical Voice performance and pedagogy, so throughout my Master's Degree programme I have been keen to focus on researching and developing my understanding of CCM and MT vocal technique to greater align with my current job role.

Throughout my previous modules I have developed a keen interest in adolescent voice. This has been a thread that has weaved throughout my modules and one which I feel is most relevant to my current practise. This specialist focus has enabled me to narrow my lens and concentrate on a specific area of voice pedagogy that is of direct and immediate impact. When considering a topic for this final piece of research I wanted to choose something that was currently an issue within my practise, something I could directly inform and address at a practical level. The majority of my students are keen to develop Belt technique and be guided through a series of exercises to support their development in this area. A general scope of the research over the years has led me to a basic understanding of the impact of using SOVT exercises as a tool, but this is often something I have felt under confident in delivering in terms of exercise selection, sequencing and justifying to students. A previous module enabled me to develop a theoretical understanding of SOVT exercises, but I am now keen to practically assess this understanding in a real-world setting and develop strategies to integrate this understanding practically.

Justification and Intended Impact

In previous learning modules I have found several interesting studies looking at strategies for teaching CCM and MT (Tan, 2020; Bartlett and Naismith, 2020) and teaching adolescent and developing voices (Manternach, Maxfield and Manternach, 2021; Sweet, 2015). I found lots of grey literature such as websites, instruction manuals and social media posts about SOVT exercises, but on a deeper dive into peer reviewed articles discussing SOVT exercises and

the impact on adolescent voices and belt technique I found a lack of crossover between these topics. This study aims to fill that gap and develop my understanding of the topic to benefit my current practise, by developing a series of targeted, evidence backed exercises for this community.

The aims of this project are:

- To develop a critically informed and systematic understanding of the physiological and pedagogical impact on SOVT exercises, building on my theoretical knowledge from previous units.
- To design and implement an evidence backed series of SOVT exercises specifically designed to support the development of belt technique in adolescent female voice within the MT genre.
- To critically explore the personal lived experience of adolescent female MT singers engaging with a planned SOVT based intervention designed specifically for their community.
- To develop practice-based insight into this specific pedagogical area to inform and contribute to the wider community of voice teachers.

Outlined Intention

Gopinath (2015) highlights the need for a researcher to understand the impact of ontology on research design. This project will align with an ontological belief of constructivism, with its epistemological belief in interpretivism. Working within a constructivist paradigm, it will focus on qualitative data; enabling the lived experience of each participant to be understood through their own construct of reality. Investigating real life experiences from the perspective of individual participants (Waring, 2012). This focus on qualitative data collection will put the participants at the heart of the research. The project will involve a literature review, looking at peer reviewed literature in the University of Wales Trinity St. David (UWTSD) library and online searches on google scholar using search terms such as 'SOVTE', 'adolescent female voice', 'belt technique' and a combination of these terms. I will use appropriate inclusion and exclusion criteria based on publication date and the participant details; for example I will be excluding papers looking at trans voice as appose to AFAB (assigned female at birth) voices

as, whilst of interest to me, is outside the scope of this current project. For practical participant research, my sampling strategy is centred around the community in which I am working, ensuring all participants are female, aged 16-19 and studying Musical Theatre singing within my private vocal studio, based in the North-West of England.

One of my proposed methods of data collection is questionnaires, where open ended questions will be used to gather a base line for the start of the study to ascertain participants understanding of SOVTE, self-reported vocal issues, self-described ability in belt technique etc. There will be interviews, conducted digitally with each participant individually, using open-ended questions. This will happen after an intervention of a programme of designed SOVT exercises. They will be transcribed digitally, and coded with In Vivo coding, enabling the participants words and personal accounts to lead the narrative.

Project Timeline

The project is over a relatively short time frame within a distance learning setting, to enable me to remain on track and hold myself accountable for regular and meaningful progress I have created a GANTT chart to give realistic targets (see Appendix 1).

Ethics and Insider Research

This project has received ethical approval through UWTSD. Seeking ethical approval enabled me to formalise the ethical considerations for this research. As some participants will be under 18, I have submitted my Enhanced DBS as part of the approval process and will be asking the participants parents/ guardians to sign an appropriate consent form. I will also request verbal consent from the individual participants with a clear description of the intended research project. 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.

When considering risk to participants, I have highlighted a risk of feelings of coercion to take part and/or remain in the project as I am their teacher and they will want to please me. To mitigate this risk I will ensure participants are aware participation is optional and can be

withdrawn at any time. Another potential risk is that of emotional distress when trying new exercises and techniques that may come from feeling anxious. To ensure I address this I will discuss this risk with the participant and the parent/guardian and provide support as necessary, again reminding participants they are able to withdraw at any time. A final risk to participants may be that of vocal strain and damage if exercises performed incorrectly. I will ensure I follow evidence-based suggestions and observe any vocal changes, looking for discomfort and stopping immediately if any vocal issues arise. I will also advise participants about referral to specialist vocal health teams if necessary.

When considering the wider risks, I have considered a risk to the investigator (myself) being accusation of impropriety, putting students in a position where they feel uncomfortable. To reduce this risk I will ensure participant or parent/guardian has given permission and been reminded they can refuse a new exercise or withdraw from taking part at any time. Another wider risk may be to the University, in terms of data protection. I will ensure any audio/video recordings of interviews with participants will be in compliance with GDPR/DPA2018 and all data submitted will be anonymous and coded. Original data will be stored on my laptop that is password protected and only accessed by myself.

This project is insider research – where the researcher is conducting a study within an environment or community they are connected with (Unluer, 2012). This research project will address the need for reflection into how insider research and the researcher's ontological beliefs have an impact on the process and the interpretation of data (Scott, 2022). Keeping a reflexive diary will enable me to continually address this.

Individual Learning Outcomes:

- Critically evaluate the effectiveness of a practise-based SOVTE intervention and assess any limitations – this will be achieved through understanding participant narratives, using observational data and data analysis.
- Critically synthesise theoretical understanding and practical application in the field of voice pedagogy – this will be achieved by designing interventions that are

appropriate to the physiological development of adolescent female voice, evidence backed and critically justified.

- Apply qualitative research methods within a constructivist paradigm – this will be achieved through the use of interviews, focus groups, in vivo coding and reflexive analysis.

PROJECT REPORT

Introduction

As a singing teacher, working predominantly within the Musical Theatre (MT) genre, most of my work centres around providing vocal tuition to students choosing to perform vocally demanding contemporary MT repertoire. Most singers I work with are aged 16-19 and, outside of my vocal studio, attend a full time Performing Arts college with aspirations of continuing their training to a professional level and working within the MT industry. I have been teaching for 16 years and, whilst I strive for continued professional development, my initial training and professional experience is rooted in Classical performance and pedagogy. There are, of course, many aspects of Classical technique that directly crossover into the MT genre: respiration, phonation, resonance and articulation (Bonamico, 2025; Bruder & Larrouy, 2023). However, there are many well documented differences in vocal style and teaching approaches (Fisher, 2022; Rooney, 2023) which has been the focus of my research thus far. My main area of interest throughout previous modules has been centred around developing Belt technique and creating strategies to effectively and safely develop this skill in adolescent female voices. I have chosen to keep my lens focussed on this specific community of adolescent female singers as it gives me a clear focus and enables me to develop a specialism that directly impacts my current vocal studio. Concentrating on one specific area of vocal pedagogy enables me to narrow my research area to be more thorough and hopefully have greater impact on my specific practise. An initial look at research into this area reveals several interesting papers looking at teaching strategies for MT (Tan, 2020; Bartlett and Naismith, 2020) and interesting studies into adolescent female voice (Manternach, Maxfield and Manternach, 2021; Sweet, 2015), but I discovered a lack of peer reviewed articles discussing warm-up techniques specific to the goal of developing effective belt technique in adolescent female voice. My previous study centred on the inclusion of Semi-Occluded Vocal Tract Exercises for warming up adolescent female voice. This was interesting desktop research, but I am now keen to create a participant focussed study to take my theoretical knowledge and apply it to a complex real-world setting. Throughout my last paper I discovered a recurring theme that the theoretical literature for SOVT exercises is not always written with belt technique in mind and where efficacy is noted in adolescent female voice it may not transfer directly to belt and MT styles. Researchers have noted that the biomechanical demands of belt technique, particularly the degree of laryngeal elevation and thyroarytenoid dominance may sit in tension with the more open, resonance-shifting effects of SOVT work (Bourne and Garnier, 2012; Titze and Verdolini

Abbot, 2012) With this knowledge, however, I am still seeing a strong desire by students to engage with SOVT exercises, with many students reporting self-identified benefits from using these techniques in their belt preparation. To further inform my practise I am keen to use this misalignment of theoretical knowledge and practise-based experiential learning to guide the study, formalising this into research, I plan to gather information in a structured way. This will centre on designing a series of planned SOVT warm-up activities specifically designed to meet the physiological needs of an adolescent female voice developing belt techniques for MT singing. The intended impact of this study goes beyond my personal practise, I aim to not only provide relevant and accessible interventions for students that can benefit my personal practise, but that this information can be shared through the wider community of voice pedagogues through my connections with other local teachers and national forums both online and in person.

Intended learning outcomes:

Throughout this research projects I wish to achieve the following:

- To develop a deeper understanding of the lived experience of adolescent female singers developing belt technique.
- To link theoretical knowledge of belt technique to real world pedagogy within this distinct community.
- To develop an appropriate and structured warm-up intervention that links theoretical knowledge to practical application.
- To develop my understanding of implications for a voice pedagogue working with students in CCM/ MT and appropriate teaching strategies to include.
- To develop an understanding of how CCM/ MT styles impact adolescent voices and how the demands of the genre impact healthy and appropriate voice use.

Literature review

A general scope of literature surrounding my specific topic has revealed a lack of peer reviewed articles into the inclusion of SOVT exercises for adolescent voice and, more specifically, if they have any impact on preparing the adolescent voice for belt technique as often required in the training of voices in the MT genre. The research into the inclusion of SOVT exercises in efficient and healthy voice production is well documented and integrated into pedagogical approaches. Scoping reviews such as Ribeiro et al. (2022) discuss the

plethora of research into using SOVT exercises and how they are the most frequently studied vocal training intervention, with straw phonation and tube phonation being the most investigated exercises. Widespread positive reported effects being acoustic, aerodynamic and self-perceived vocal outcomes (Ribeiro et al., 2022). This study, however, was focusing on adult voices and only examined immediate effect with relatively little evidence into long term benefits. Research conducted by Adriaanson et al. (2025) used children as participants, however all participants had vocal fold nodules and presented with vocal issues. Whilst not working directly with singers, the paper brought forward interesting research into the toleration of paediatric participants in an SOVT based intervention to improve phonatory efficiency and perceived voice quality. A study by Paes et al. (2017) also used children as participants and used SOVT intervention to ease vocal efficacy by measuring reduction in phonation threshold pressure (PTP) and reduced collision forces between the vocal folds, leading to improved vocal economy. Whilst insightful, the participants again were presenting with vocal issues and dysphonic voices, limiting its transferability to this investigation. A paper by Meerschman et al. (2017) used participants aged 17-22 and used a structured SOVT intervention for future occupational voice users. Whilst not linked to singing specifically, this paper highlights the use of an SOVT intervention for planned voice use and demonstrated research into a similar age group.

A scope of literature discussing belt technique reveals several key physiological factors. Typified by a higher closed quotient (CQ), belt singing requires the vocal folds to remain closed for a greater proportion of each vibratory cycle (Bourne & Garnier, 2012; Sundberg, Thalén & Popeil, 2012). Belt requires greater subglottal pressure, this has been measured directly through aerodynamic studies such as Björkner (2008) and is often noted as one of the defining features of belt (Sundberg, Thalén & Popeil, 2012). Electroglottographic (EEG) studies evidence greater vocal fold adduction; firmer glottal closure creating greater vocal fold contact during belt (Barlow & Lovetri, 2010). Greater thyroarytenoid (TA) muscle activity is evidenced in studies using Electromyographic techniques, contributing to a speech-like timbre that is predominantly M1 (chest dominant) in terms of laryngeal mechanism (Schutte & Miller, 1993; Bourne & Garnier, 2012). Belt is frequently associated with an elevated laryngeal position, with various substyles demonstrating forward tongue position and a narrowing of the epilaryngeal tube (Bourne & Kenny, 2016).

The key area of interest within this literature review is the conflict between the reported benefits of SOVT exercises and the physiological requirements for belt technique. Titze and Verdolini Abbot (2012) is an eminent research paper that outlines the key physiological benefits of SOVT exercises as reduced phonation threshold pressure, increased supraglottal pressure, reduced collision forces on the vocal folds, more efficient source-filter interaction and reduced vocal effort. If we then look to papers discussing the physiological requirements of belt such as Bourne and Garnier (2012) we see reference to conflicting requirements such as higher subglottal pressure, increased thyroarytnoid (TA) muscle activity, a high laryngeal position and increased closed quotient (CQ). The contradiction therefore comes from a difference between the goal of the SOVT exercise and the physiological belt requirement. To document this contradiction in literature I have compiled a list of key findings evidence in literature:

Physiological factor	SOVT Exercises	Musical Theatre Belt
Vocal fold collision	Reduces collision forces by increasing supraglottal back pressure (Titze, 2006; Guzman et al., 2013).	Typically involves firm vocal fold adduction, increased collision forces due to vocal intensity and longer CQ (Bourne & Garnier, 2012).
Supraglottal pressure (back pressure)	Increased supraglottal pressure improves vocal tract impedance and lowers PTP (Titze, 2006; Titze, 2020).	Supraglottal shaping, epilaryngeal narrowing (Titze, 2008).
Subglottal pressure	SOVT exercises increase subglottal pressure, making phonation more efficient. Different SOVTEs generate differing pressure levels depending on the degree of occlusion (Guzman et al., 2014).	Belt requires substantially elevated subglottal pressure to maintain chest-dominant production and sustain vocal intensity (Sundberg, Titze & Scherer, 1993; Titze, 1989).
Phonation Threshold Pressure (PTP)	Lower PTP, allowing phonation with less effort (Titze, 2006).	Belt exceeds PTP intentionally to achieve

		desired intensity (Bourne & Garnier, 2012).
Vocal Tract Configuration	Partial occlusion (lip trill, voiced fricatives, humming, straw etc.) increases acoustic impedance and back pressure (Titze, 2006)..	Open vocal tract with specific resonance strategies (twang, vowel modification, epilaryngeal narrowing) rather than occlusion (Guzman et al., 2014).

Whilst demonstrating several contradicting factors, there is some convergence seen between the columns, such as in supraglottal pressure, which provides an interesting overlap at the beginning of this study, developing the drive to investigate further. Most of the studies referenced above use adults as participants, so it cannot be assumed that physiological demands and noted outcomes are transferable within the community of adolescent female voice. Cooksey and Welch (2008) highlight that there is a lack of research into adolescent female voice change and the historic focus has been researching adolescent male voice change, investigating the impact of testosterone on the male vocal physiology. Considerably more research has focused on adolescent male voice, despite the large impact the surge in pubertal hormones; Estrogen and Progesterone, has on the female voice (Welch, 2014). There are several key physiological changes occurring in female adolescence which have potential impact on voice use. It is well reported that there is an increase in vocal fold length and mass, leading to a lowering of speaking fundamental frequency by approximately 3-4 semitones (Matar et al., 2021; Cooksey and Welch, 2008), whilst less dramatic than in male voices this change still has a large impact on voice use with increased vocal fold mass altering registration and pitch stability through a lack of vocal coordination due to the sudden and often sporadic changes in the vocal folds (Titze, 2000; Bourne and Garnier, 2012). A reported growth and rounding in shape of the larynx in adolescent females results in changes to the resonance characteristics and vocal tract dimensions (Matar et al., 2021; Abitbol et al., 2019), these anatomical changes are reported to impact precise tuning and resonance strategies leading to a lack of control over acoustical elements of voice use (Fitch & Giedd, 2009). Hormonal changes influence vocal fold tissue composition in female adolescent voice, particularly in terms of mucosal viscosity (Matar et al., 2021; Gackle, 2014) this impacts vocal stamina, leading to vocal fatigue and lack of consistency in maintaining vocal intensity over long periods (Gackle, 2014; Sweet, 2019). A

change in the vocal tract dimensions leads to changes in acoustic output and resonance frequencies, altering timbre and vocal range (Welch, 2014; Fujiki et al., 2025).

Research agrees that there are physiological changes occurring in female adolescent voice, though this may be more gradual and less dramatic than in the male voice. This has historically been overlooked in both research and pedagogy prior to MRI and acoustic studies which have demonstrated significant changes in vocal tract length, resonance frequencies and vocal fold morphology (Fujiki et al., 2025, Sweet, 2019). These anatomical findings have rarely been translated into evidence based singing pedagogy, particularly for demanding styles such as musical theatre belt. Baker et al. (2024) articulates the limited evidence available on adolescent singing voice, noting the reliance on extrapolating research from adult singers rather than conducting age specific research. We understand how the adolescent female voice changes on a theoretical level and we understand the physiology of belt, but limited evidence is available connecting the two and understanding what interventions can work within this specific area. Whilst SOVTs and belt differ in their immediate physiological objectives they share an underlying reliance on efficient source-filter interaction. This study aims to investigate the perceived impact of an intervention of SOVT exercises within the community of adolescent female singers developing belt technique for MT singing. A key study by Manternach, Clark and Sweet (2024) investigate in effect of straw phonation on adolescent female singers, using objective acoustic measures and the singers' own perception of vocal efficiency. This study provides preliminary evidence for both acoustic and perceived benefits of SOVT exercises in adolescent female singers, however it leaves scope for investigation into whether perceived benefits transfer into demanding vocal tasks such as musical theatre belt.

Methodology

This study is routed in the interpretivist research paradigm, seeking to understand how individual participants experienced, understood and attributed meaning to the planned intervention. It does not seek to establish a single objective, rather it acknowledges that individuals may experience the same phenomenon differently (Creswell and Poth, 2018). The study is informed by a constructivist epistemological position, which proposes that knowledge is not simply discovered, but is constructed through individual experience (Crotty, 1998). The study does not seek to determine if SOVT exercises physiologically improved belt production; such a claim would require physiological, aerodynamic and acoustic

measurements beyond the scope of this project. Instead, the research aims to explore participants perception of their voice before, during and after the intervention and use this knowledge to inform pedagogical implications. The Interpretivist positioning acknowledges the role of the researcher in the interpretation of knowledge; interpretation is inevitably influenced by professional knowledge and experience (Finlay and Gough, 2003). Reflexivity was therefore an important consideration throughout data collection and analysis.

Ethical Considerations

Participant selection will be singing students from within the singing studio of the researcher. Participants will be under 18, so written parental permission will be required. Each participant will be informed of the research methods and made aware of their right to withdraw at any time. Practical ethical considerations are outlined on the Ethics Form (appendix 2) and include: gaining written consent, audio and video recordings of interviews with participants will be in compliance with GDPR/DPA2018, information will be stored on a password protected computer and copies of transcripts can be requested by participants at any time. One key ethical consideration is the feeling of coercion to take part or remain in the process due to the existing participant-researcher relationship. This will be mitigated by the knowledge given to them of their right to withdraw and the reassurance that this will in no way affect their current vocal tuition. A significant ethical consideration is the notion of insider research; where the researcher is conducting a study within a community or environment they are connected with (Unluer, 2012). Insider research can be viewed as having a positive impact; studies completed by insider researchers tend to be diligent and committed due to the direct benefit to the researcher (McClintock et al., 2003). Insider researchers also have ease of access to research participants (Ross, 2017) however there may be shared presumptions between the participant and researcher and a feeling of discomfort for the participant in sharing honest opinion (Chavez, 2008).

Methods of Data Gathering

My initial data gathering came from an online questionnaire. This was designed to gather initial data about the participants current warm up technique and assess some baseline knowledge into SOVT and if they are including any specific SOVT warmups in their routine. Baseline assessment is recommended in educational intervention research as it enables the researcher to identify the participants starting point and any existing knowledge gaps (Bloom

et al., 2007; Nagy-Pénzes et al., 2022). Once participants had been identified and the correct permissions gathered, I sent the initial questionnaire via google forms. This was a convenient way of gathering the information that made it easy to collate information efficiently. Lee (2020) highlights the benefit of using online forms such as this for their accessibility, ease of use and ability to collate responses automatically, reducing the risk of transcription errors and improving data management. I also gathered information at this stage as to the preferred form of intervention; written instruction, poster, video etc. as this directly informed my design on a participant level. Responding to data on preferred methods of information sharing and using that to inform the process, ensured the process was evolving throughout the study, informed directly by the participants in line with my methodological design of putting the participants at the centre of the study. With 100% of respondents responding with 'video demonstrations' as their preferred method of intervention, I began researching appropriate ways of creating this content. Fyfield, Henderson & Phillips (2022) carried out a systematic review specifically investigating video based instructional education videos. The review analysed multiple peer-reviewed studies and several evidence-based principles and developed a strong evidence-based guideline for effective video creation. The main findings were that videos should be short, segmented into manageable chunks and ensuring coherence by avoiding unnecessary information (Fyfield et al., 2022). This is also supported by Fiorella (2021) who, when investigating instructional videos, found that including multimedia elements such as additional text, titles and descriptions enabled a wider range of viewers to engage successfully with short, segmented video content. A research paper by Mayer (2021) summarises decades of research into instructional videos and also articulates the importance of video length, coherence and multimedia elements. This paper expands into the requirement for signalling; highlighting of important information, and personalisation; where viewers feel comfortable with the presenter and develop a sense of connection through the use of conversational language and positive reaction (Mayer, 2021). With this in mind, I created the following practical considerations for the video creation that I followed when designing:

- Videos will be short, divided into manageable chunks, lasting no longer than 10 minutes in total. This is in line with the information gathered from the participants into their usual warm up time (5-10 minutes being the most chosen answer) and research gathered from the literature (Fyfield et al., 2022; Fiorella, 2021)
- Videos will synchronise visual modelling with audio demonstration and verbal explanation to support a Multimedia approach (Fiorella, 2021)

- Videos will avoid unnecessary distraction with plain backgrounds, no additional music or distracting graphics (Fiorella, 2021; Mayer, 2021).
- Videos will use conversational language and positive wording to develop a sense of personal connection (Mayer, 2021).
- Videos will encourage active engagement rather than passive viewing (fyfield et al., 2022).

This evidence-based criteria was useful in the creation of the videos from a methodological lens. Practically, they were created using a smart phone to film in the location of my studio and edited in 'imovie'. I chose this platform as it is one I have used before so felt comfortable with the technology, minimising the production time to enable me to remain on track with the planned timetable and optimise time for participants to engage with the intervention. Once the videos had been created it was distributed to participants using 'wetransfer', a secure video sharing platform which allows the sender to see if the participant has been able to successfully download the file. Participants were informed that they 3 weeks to engage with the resource, using it as a warmup strategy before practising belt technique and reflect on any changes or impact. Participants were encouraged to keep a reflective diary whilst engaging with the intervention to inform their responses in the interviews. As highlighted by Thille et al. (2022) diary entries during an intervention help capture experiences as they occur, reducing the reliance on retrospective recall. Diary entries also act as prompts during interviews, enabling participants deeper reflection from accurate recall, generating richer, more contextualised data (Thille et al. 2022; Unterhitzengerger & Lawrence, 2022). Support was given to participants in creating their reflective diary and they were informed the diary was for them personally and did not need to be submitted, rather used as a guide to support their interview later in the process. Guidance was given in line with Stephens, Ottrey & Matthews (2026) who suggest that giving participants semi-structured prompts generates richer reflection than simply asking participants to 'write a diary', giving suggestions of frequency, example questions and suggested length of entry is beneficial in providing support. Unterhitzengerger and Lawrence (2022) articulate the balance between providing support and allowing flexibility of response and reflection, noting that loose guidance and semi-structured prompts enable participants flexibility to reflect on experiences that are meaningful to them which will inform subsequent interviews in a meaningful way. This is in line with my methodological approach, putting the participants' words and experiences at the heart of the study. The following semi-structured prompts were sent to participants as a suggestion of questions to ask themselves after a practise session using the warmup intervention:

- 1. Which exercises did you complete today?**
- 2. How did your voice feel before and after the warm-up?**
- 3. Was there an exercise that felt particularly helpful or challenging?**
- 4. Did you notice anything different in your belt voice today?**
- 5. Is there anything else you would like to record about today's practice?**

Data was then gathered through semi-structured individual interviews via zoom. In my previous papers I conducted face to face interviews, but upon reflection this was a logistical issue in terms of availability and planning. The plan to move these to a zoom based, digital platform is noted by Archibald (2019) as being positive for both researcher and participant due to convenience, reduced travel time and ease of use. This is also discussed by Oliffe et al. (2021) who articulates the ability to still develop a rapport with the participant via the platform whilst making transcription and efficient data handling more efficient. I have chosen to use individual semi-structured interviews rather than group interviews or discussion as I am keen to capture the participants individual reflections on the intervention rather than exposing them to the views of others from the study. It is hoped that this method will reduce the potential of group influence and conformity in line with the findings of (Kallio et al., 2016). To design the semi-structured interviews, I will use Dejonckheere and Vaughn (2019) as guidance for the design of the semi-structured interviews, this paper provides a flexible framework to ensure consistency across participant interviews, whilst allowing the interviewer to explore topics of importance to the individual participant through probing follow up questions, generating rich and detailed qualitative data. Predetermined Semi-Structured interview question guide in Appendix 5.

Once data gathering had taken place, transcription software was used to enable coding using 'Delve' software to enable thematic analysis. Byrne (2022) highlights the need for researchers to familiarise themselves with the data as it is an interpretive process, the themes do not simply emerge from the data, but are constructed by active engagement with the coded data. In previous projects I have familiarised myself with the data through a deep dive reading of the transcript and listening to the recordings, but found that by doing so, I was interpreting themes before systematic coding had taken place and this led to a lack of clarity in the analysis. I therefore chose to follow the 6 coding steps outlined by Braun and Clarke (2006), this structured approach enabled the identification of patterns to inform broader themes across a data set through familiarisation, generating initial codes, searching for themes, reviewing themes, defining and naming and producing a report (Braun and

Clarke, 2022). Initial coding will utilise In Vivo coding; a qualitative data analysis that uses the actual spoken words of the participants (Manning, 2017). Then Pattern coding, clustering codes into smaller categories, widening the lens before deriving themes (Saldaña, 2016). Thematic analysis will analyse connections between themes, interpreting shared experience to investigate the research question.

FINDINGS

Interview data was analysed in line with Braun and Clarke's reflexive thematic analysis, developing initial codes into broader patterns with shared meaning. The analysis generated four key themes: navigating a changing adolescent voice; from vocal readiness to producing belt with less perceived effort; developing vocal awareness and confidence; and an intervention that adolescents will use. Themes are interconnected, with several codes contributing to more than one theme. For example, descriptions of increased vocal control, reduced effort and increased confidence often overlapped suggesting that participants perception of physical changes were symbiotic with their sense of trust and security in their voice. Across interviews, participants articulated day to day changes in their vocal response, including variation in range, control, breathiness, comfort and the occurrence of voice cracks. Participants also described their voice after the warmup intervention as 'relaxed', 'warm', 'free' and 'switched on', suggesting that the intervention had an impact on their perception of vocal readiness before progressing into demanding singing tasks. Descriptions became particularly significant when discussing previous belt experience and using phrases such as 'forcing out air', 'pushing out the sound' and descriptions of tension. This section will discuss each theme in detail, linking it to participants words and theoretical knowledge.

Finding consistency in a changing voice

One of the key patterns to emerge from the dataset was the varying experience of adolescent voice, with often unpredictable changes in range, tone and timbre. With participants using phrases such as: 'sometimes it's more breathy than others' (Participant 6); 'other days I just can't seem to do it [belting]' (Participant 5) and 'some days I can sing for a long time, other days it feels really hard' (Participant 2). None of the participants are describing these as specific vocal problems rather they are frequently referring to fluctuations in vocal function on a day-to-day level. Descriptions focussed on breathiness,

vocal fatigue and range, but also linked this to vocal trust and confidence. Consequently, when referring to the warmup, the discussion was centred around the SOVT exercises assisting in management of these daily changes rather than eliminating them. One participant reflected on not knowing if their voice would respond as they desired on the day:

'I just feel like I don't have much like control over how good it is, it just depends what the day's like' (Participant 6).

Similarly, another participant described:

'It's hard to say because some days I can just belt really well and other days it just feels like I can't do it, like my voice is tired and I can't make the sound and I'll just have a voice crack.' (Participant 2).

These comments were coded as vocal control, daily differences, vocal tiredness and voice crack. These codes contributed to a broader picture of adolescent vocal variability.

Participants rarely described isolated incidents of variability, there was a high level of acceptance that this formed part of their everyday singing experience, referring to daily changes in a relaxed way, with a notion of preconceived expectation. This not only influenced comments on their performance, but also their confidence, particularly in terms of reliability of belt technique and singing challenging musical theatre repertoire. This aligns with existing literature surrounding adolescent female voice change. From the literature review the evidence is that the changes in pubertal hormones that surge during adolescence, impact the female voice in terms of physiology. Whilst historically studied less than male voice change, female voices go through a period of impactful change typified by changes in vocal fold structure, laryngeal growth and hormonal fluctuations resulting in instability in tone, stamina and flexibility (Cooksey, 1992; Welch, 2006; Gackle, 1991; Matar et al., 2024). Participants often described variability and day to day changes before discussing the intervention. Interestingly they didn't describe that the intervention prevented vocal variability, rather they suggested that the warmup enabled them to respond to how their voice felt on a particular day:

'Some days my voice is just really tired or feels tense so I would do longer on the straw exercises and that would help' (participant 3).

Similarly, another participant commented:

'If my voice is feeling tired...then I have a little bit of a break and do some straw exercises or some sirening and then it made my voice feel like relaxed and then I could go for it again' (participant 5).

These comments suggest that the intervention was being used not just as a simple warm up designed for the start of a session, but participants appeared to use the exercises as both an opportunity to assess the condition of their voice and as a way to reset during periods of high intensity singing, linked to the more vocally demanding musical theatre style. This linked these comments to codes such as 'awareness' and 'learning about my voice', linking the participants descriptions to their ability to attend to their own personal challenges on a day to day, session by session basis. Although the intervention did not appear to reduce daily vocal variations such as the occurrence of a breathy tone, lack of control or reduced range, participants described feeling better equipped with exercise options to help manage these experiences. This is an important distinction as, from a reflexive thematic analysis perspective, the significance lies not in whether the intervention altered vocal physiology, but how the participants made sense of their experiences of managing daily voice fluctuations.

One interesting aspect of the coding was the participants descriptions of breathiness. This description came from almost every interviewee. This is in line with literature surrounding adolescent voice change which highlights that changes in vocal fold mass caused by sudden periods of laryngeal growth can impact efficient fold closure leading to breathiness as a key identifier of adolescent female voice (Gackle, 2014; Manternach, Clark and Sweet, 2024). Participants used words such as 'breathy', 'airy' and 'fuzzy'; one participant reflected:

'[I found it] really helpful to go straight from doing the warmup into doing some of my songs...it made my voice less breathy and fuzzy' (participant 3).

Interestingly the participant didn't simply describe changes to the voice in terms of acoustic change, rather there was a focus across the transcripts of the use of sensory language, describing the voice as being 'ready' and 'switched on'. It would not be appropriate to describe these comments as evidence of physiological changes such as altered vocal fold adduction, however they are consistent with improved vocal efficiency through effective source-filter interaction and vocal tract impedance. Titze (2006) suggests that SOVT exercises strengthen source-filter interaction, reducing the effort required through lower PTP, efficient vocal fold oscillation and reduced vocal fold collision force. Phonation is also more

efficient through vocal tract impedance, with inertive reactance leading to slightly higher supraglottal pressure, smoother closure and reduced phonatory effort (Titze et al., 2016). Titze (2020) expanded his work, suggesting that semi-occlusions create favourable source-airway interaction, with increased inertive reactance opposing excessive vocal fold collision. The key finding in this paper is that repeated SOVT exercises help singers develop motor patterns and kinaesthetic awareness required for phonation after the semi-occlusion is removed, preparing the singer for increased aerodynamic and acoustic demands (Titze, 2020) suggesting a positive link to preparation of belt singing.

The relationship between daily vocal variability and confidence often emerged in the data. Participants linked unpredictable vocal changes with uncertainty about approaching vocal tasks, particularly in relation to challenging musical theatre singing and belting. Voice cracks, reduced range and vocal tiredness seemed to influence how the participant viewed their singing and how they anticipated singing. One participant explained:

‘Yeah [after the exercises] I sort of stopped worrying about like my voice cracking or having a bad day or anything and I could just like enjoy it a bit more [belting] and I felt like I was trusting my voice a bit’ (participant 4).

This comment was interesting as it linked together vocal trust and enjoyment with navigating daily changes. Sweet (2015) demonstrated that adolescent female singers present vulnerability in their approach to singing due to the unpredictable nature of adolescent voice change, describing singers as creating a continual risk assessment before phonating. This suggests that the inconsistencies in vocal functions impact the singer’s confidence in a dynamic way, altering through continual assessment as variability occurs.

Whilst the majority of participants described the intervention positively, not every participant experienced a positive impact, with participant 5 articulating limited change to daily fluctuations. This reflects the individual nature of adolescent female voice and highlights that no intervention can remove variability and vocal challenges associated with growth and maturation. The variability in the responses highlights that adolescent female voices are dynamic instruments that change from day to day. The SOVT intervention was therefore experienced as a strategy for assessing and preparing the voice for singing, this interpretation provides the foundation for the subsequent theme which explores the readiness of the voice as it transitions into musical theatre belt.

From vocal readiness to producing belt with less perceived effort

A prominent theme from the participant interviews concerned the relationship between feeling vocally prepared and the participants subsequent experience of producing belt. Initial coding distinguished between vocal readiness and reduced effort perceived in belting. However, during theme development these codes appeared difficult to separate meaningfully as participants frequently described feelings of readiness immediately before explaining differences in perceived effort. This therefore suggested that vocal readiness was not experienced as an isolated outcome, rather the significance appeared to be in how that state carried forward. This theme captures progression; four interconnected subthemes contribute to this interpretation: vocal readiness, changes in muscular tension, changes in perceptions of effort and breath and the transfer of these sensations into belt singing.

Vocal Readiness

If we begin at the perception of vocal readiness, there is evidence across the data that the SOVT intervention established a state of readiness before progressing to more demanding singing tasks associated with musical theatre singing and belt technique. The exercises were not viewed as specific belt training, rather as a means of creating a transition, enabling a smooth and controlled transition into vocally demanding tasks. The concept of readiness emerged from descriptions such as 'warm', 'switched on', 'free', 'relaxed', 'open' and 'connected'. These phrases were initially coded separately, but collectively represented a shared experience of vocal preparation. One participant explained:

'[after the warm up] It felt like I just got into my voice quicker' (participant 4).

They expanded by saying:

'then when I then started going into a big song it was like my voice just felt like it was already switched on' (participant 4).

Rather than describing any specific changes to physiology, participants relied on metaphorical and sensory language to explain their individual experience of vocal readiness. Crisosto-Alarcon et al. (2025) highlight that singers often express vocal sensations through embodied language rather than anatomical physiology. Sweet (2015) also articulates that adolescent female singers describe their changing voice through subjective sensations of

their lived experience rather than using technical physiological language. The use of this sensory language provides insight into how adolescent singers perceive effective vocal preparation. Several participants expanded their description by contrasting it with previous warm up experiences, often simply singing through a song or doing some scales, without and structure of progression. One participant explained:

'[I would usually start with] singing some random scales' (participant 4).

Another commented:

'I usually just pick a random YouTube video' (participant 5).

These reflections suggest that the participants did not necessarily lack warmup experience, rather they may have lacked a structured approach that progressively readied the voice before moving to more demanding singing tasks. There was some recognition of SOVT exercises both across the questionnaire and interviews. Some participants referenced experience of straw phonation and humming, but these were often described as isolated techniques rather than components in a structured warm up designed for adolescent voice. There were several comments describing straw exercises found on YouTube and social media. One participant commented:

'I've done lots of straw exercises before from YouTube and from TikTok and Instagram' (participant 6).

However, they later reflected that this was not always a positive experience:

'The ones on YouTube...they start off really low but then they go really high quite quickly and I felt like I was struggling with the range whereas this one was in a really comfortable range and so I could like actually concentrate on what exercise I was doing and how it felt rather than trying to hit the notes' (participant 6).

These comments suggest that participants perceived the value of not only the inclusion of the SOVT exercises, but the suitability for the developmental stage. This finding has important pedagogical implications as it indicates that the exercise selection alone may be insufficient without consideration to vocal range, progression and specific community context.

Not all participants described the same degree of vocal readiness, some mentioned that the warmup did not alter their perception of belt readiness or production and some mentioned cumulative changes over time rather than immediate effect. This variation again reinforces the importance of individual experience and personal lived experience within this community rather than universal outcomes.

Changes in muscular tension

A prominent pattern across the data was the language used to describe belt singing after the intervention. Whilst participants still acknowledged belt as a physically demanding task, the previous descriptions of 'forcing', 'pushing' and 'shouting' were being replaced with descriptors such as 'controlled', 'comfortable' and 'easier'. This suggests that participants perceived a change to belt production from one of physical effort to one of vocal control. Participants often associated this perception of reduced effort to a reduction in associated muscular tension. There were several codes to emerge from the dataset including: 'throat tension', 'neck tension' and 'lip tension' which gave an overall picture of muscular tension during belt which was reduced following the intervention. One participant noted:

'I feel like that [the straw exercise] just helps my voice be really relaxed and removes all the tension before I hit the belt' (participant 5).

Another participant reflected:

'I usually get a lot of tension in my voice especially when belting, but this made it feel relaxed and made me feel like I could hit the belt easier and manage to go higher' (participant 1).

These comments suggest a recognition of the tension experienced in previous attempts of belting, interestingly these comments were given with a sense of inevitability, with tension viewed as an inevitable consequence of producing a powerful sound. Following the intervention participants seemed to articulate an awareness that this tension is unnecessary and, possibly more importantly, recognising that it was not essential for producing belt efficiently. One participant commented that until the intervention, they had not realised how

much tension they habitually held and the exercises had encouraged them to slow down and focus on the sensations occurring during the warmup and the following vocalisations. They reflected:

'I actually hadn't realised how much tension I have in my throat till I did the exercises and started noticing it wasn't there like normal' (participant 4).

This account was of particular interest as it suggests that the intervention may have facilitated a greater level of kinaesthetic awareness in terms of vocal tension. Rather than describing that the exercises removed all tension and it completely disappeared, it was enabling participants to recognise and name the feeling, adjusting their practise accordingly. Rather than providing evidence for an objective change in muscle activity leading to feelings of tension, participants are describing their personal awareness and proprioception. These accounts align with Apfelbach & Guzman (2024) who, upon analysing 53 separate studies, noted that reduction in perceived phonatory effort and reduced feelings of vocal tension were in association with the inclusion of SOVT exercises.

Changes in perceptions of effort and breath

The theme of tension was often linked with the code 'push', with participants describing an active attempt to make their voice stronger by 'pushing'. One participant explained:

'Normally I feel like I kind of push a bit ...definitely like force the sound'
(participant 6).

The language of pushing is of interest as it again represents the participants perception of effort rather than something that is measured in quantifiable terms. It cannot, therefore, be assumed that increased laryngeal and extrinsic muscular activity occurred, but the descriptions provided by participants are in line with considerable physical exertion. Following the intervention the language shifted to phrases such as 'relaxed', 'easier to sing' and 'voice felt free' which suggested that participants were distinguishing between the effort inherently required for an energetic vocal quality and the effort and tension that was now perceived as unnecessary. One participant described:

'I could get the same strong sound, but I didn't feel like I was working as hard'
(participant 4).

Musical theatre belt is a vocally demanding skill characterised by firm vocal fold adduction, increased collision forces and a longer closed quotient (Bestebreurtje & Schutte, 2000). A paper by Bourne and Garnier (2012) investigated laryngeal and acoustic characteristics for belt in female musical theatre singers and demonstrated that belt was a specifically coordinated vocal behaviour with greater vocal fold adduction and specific vocal tract resonance strategies that was perceived as high intensity in comparison to legit production. Although this study does not include physiological measures, the repeated descriptions of feeling 'more relaxed' and 'less tense' are consistent with the proposed mechanisms. Consequently, the participants descriptions of 'less effort' should not be interpreted as requiring less physiological work. Rather participants are perhaps perceiving less unnecessary effort. Enabling the belt to remain strong whilst being less constricted following the intervention. It is important to remember however, that these findings represent individual experiences that are subjective, rather than direct evidence of physiological change.

Another area of particular interest in this theme was that of perceived effort in respiration, the code 'breath' frequently appeared alongside descriptions such as 'forcing out air' and 'big breaths'. Prior to the intervention participants described their belief that belt required large breaths and expelling substantial amounts of air to achieve the vocal intensity they desired. One participant commented:

'I think I've got into the habit of thinking that I need to take really big breath for belting' (participant 5).

With another describing:

'I just I feel like since I was little, I've always felt like if I'm going to sing a big note I've got like take loads of breath' (participant 4).

Both these accounts suggest that participants often equate increased airflow with increased vocal power. This is in line with Thorpe et al. (2001) who, when studying professional singers, found a strong belief in participants that vocal projection was associated with high

expiratory airflow, this paper also hypothesised that this notion was embedded in traditional voice pedagogy and led to a gap in knowledge amongst singers as to the importance of increased efficiency rather than increased air expenditure. However, following the intervention participants frequently referred to perceived changes in how they view their personal breath management. One participant explained:

'I feel like [after the exercises] I wasn't needing to take massive breaths as much' (participant 4).

They expanded by saying:

'I think I've realised that you don't actually need to have loads of breath. You just have to like control the breath that you already have' (participant 4).

Rather than describing a reduction in respiratory support this participant is referring to their breath being 'controlled'. This is important as it represents a distinction between the perceived use of breath before and after the SOVT exercises, whilst this can not be measured in terms of quantitative expiratory air flow measurements, the perception of the participants of 'using less breath' and 'forcing out less air' develop a concept of enhanced respiratory control. This interpretation aligns with contemporary understanding of SOVT exercises which suggests that partial vocal tract occlusion alters the pressure relationship across the vocal folds and promotes more efficient phonation through favourable source-filter interaction (Titze, 2006; Andrade et al. 2016; Apfelbach and Guzman, 2024).

Transfer into Belt Singing.

An interesting detail of this theme was the description of the transition from the warmup to singing. Participants referred to feeling 'into my voice quicker', with 'less of a jump' between speaking and singing and finding that songs became more comfortable after the warmup. One participant reflected:

'I found it really helpful to go straight from doing the warmup into doing some of my songs' (participant 3).

Another explained:

‘when I went from the warmup straight into singing a big song it was like my voice just felt like it was already switched on’ (participant 4).

Descriptions such as this were coded as ‘transition into singing’ which occurred throughout the dataset. Whilst not representing improved belt production, participants seemed to describe a reduction in the effort required to transition towards a state which made belt feel achievable. This is in line with a paper by Manternach, Clark and Sweet (2024) who investigated whether a 4-5 minute straw phonation warm up could facilitate easier phonation and register transition in female adolescent voices. Whilst not linked directly to musical theatre singing and belt technique, it creates many of the same benefits of vocal readiness being described by participants. This transition into singing was often discussed alongside changes in perceived vocal effort. Participants noted past experience of ‘pushing’, ‘forcing air’ and ‘shouting’ with one participant commenting:

‘Normally [to belt] I feel like I kind of push a bit...definitely like force the sound’
(participant 6)

And another adding:

‘I think if you can get your voice really warmed up in and free then you can still make that strong sound without it being shouty’ (participant 4).

The language does not suggest that participants perceived that the intervention reduced the intensity of the belt, rather they were distinguishing between producing a powerful sound with force and producing it with reduced effort. If we look at the literature surrounding belt, it is often described as requiring high sound pressure levels and increased vocal fold contact (Bourne and Garnier, 2012). These physiological characteristics are not necessarily requiring excessive muscular effort or force. Instead, efficient belt production depends on coordinated interaction between respiratory, laryngeal and vocal tract system (Herbst, 2017). Participant descriptions appear consistent with the notion that belt can be produced with less perceived effort with one participant stating:

‘It was almost just like I wasn’t trying as hard, normally I feel like I sort of push to get out the belt sound but after, I didn’t feel like I needed to’ (participant 3).

Another participant commented:

'It didn't sound like that heavy shouting...even when I was making a strong sound it had a bit of a brighter sound to it which was good' (participant 4).

This led to the development of the code 'brighter' which was of particular interest in this context. Participants also used words such as 'clearer' and 'more ring' to describe the feeling of the vocal timbre post intervention. Whilst these cannot be interpreted as objective acoustic measurements they may reflect the perception of altering resonance strategies. Research has shown that SOVT exercises promote effective source-filter interaction, particularly in terms of resonance tuning, allowing the vocal tract to assist vocal fold vibration rather than simply filtering the acoustic signal (Titze and Story, 1997; Titze, 2006). This interaction lowers phonation threshold pressure, promotes effective resonance and reduces phonatory effort (Guzman et al. 2013). The bright, clear sound participants are describing has also been noted in a paper by Bestebreurtje & Schutte (2000) when investigating resonance strategies for female belting who found that the 'bright' sound referred to by participants is achieved by the implementation of resonance strategies that enhance higher harmonics; an altered vocal tract, resonance tuning and vowel adjustments leading to a characteristic bright timbre.

This interpretation was of particular interest because it challenges the assumption that SOVT exercises and belt represent opposing vocal tasks. The literature review identified several physiological contradictions; however participants rarely described these approaches as contradictory. Instead, they often referred to the intervention as effective preparation, this was *particularly evident in comments such as:*

'I think the straw gets you warmed up, but then...you need to warm up that belt sound afterwards' (participant 6).

This was expanded on by explaining:

'I tend to do [the intervention] first...and then I'll do some more belty warm-ups like spoken residence' (participant 6).

This suggests that the participant viewed the warmup intervention as a means of establishing the necessary conditions before moving on to specific belt technique practise.

This was supported by several participants who chose to follow the intervention with additional scales and belt specific warmups. Rather than indicating a limitation of the intervention, these comments suggest that each participant understood that their personal vocal preparation was an individual progressive process in which SOVT forms just one foundational stage.

Developing Vocal Awareness and Confidence

A key theme to emerge from the data was concerned with the participants developing understanding of their own voice. Throughout the interviews participants described awareness of vocal control, recognition of their response to specific exercises and developing confidence in their ability to manage their voices independently. The code 'confidence' was regularly seen in the dataset, alongside 'learning about my voice', 'vocal trust', 'awareness' and 'initial scepticism'. When considered together these codes not only suggest confidence as a positive outcome, but rather something that appeared alongside increased knowledge and awareness leading to a feeling of perceived vocal control.

Participants entered the study with differing levels of knowledge and experience; in the initial questionnaire some noted familiarity with SOVT exercises whilst others had little understanding of their purpose. Some participants noted an exposure to SOVT exercises, but this did not necessarily equate to the understanding of their purpose. This distinction was evident within the code 'SOVT knowledge' where one participant explained:

'Obviously I've seen that they're good for my voice and learn about them in college but I didn't really understand why they're good for you' (participant 6).

This account suggests an important distinction between knowing what an SOVT exercise is and understanding your response to it. Participants often linked their knowledge of SOVTs to social media exposure with several participants referencing 'TikTok', 'YouTube' and 'Instagram':

'I watch videos and reels of like people using SOVTs and doing straws to make their voice stronger and to make them sound better, but I haven't done much of them myself before other than copying stuff off TikTok but I don't know if I was doing it correctly'
(participant 1)

This account makes it clear that exposure to SOVT exercises does not necessarily equate to knowledge of their purpose, particularly on an individual voice level. This is in line with Hutapea et al. (2026) who, when investigating using YouTube vocal warm ups, suggested that the quality of description and accurate tuition is variable and, whilst it has some benefit in terms of accessibility, is best used as a complimentary addition rather than primary source of vocal training. Alter et al. (2026) analysed 146 TikTok videos found using searches such as 'vocal health' and 'voice tips' and found that 94.5% of videos were produced by non-clinicians, with many being inaccurate. The key finding in the paper was that popularity did not predict accuracy and engagement was often negatively related to quality and reliability, meaning that content being broadly consumed was often inaccurate. It would not be appropriate to suggest that social media causes poor vocal training, rather that exposure to content of varying quality with conflicting advice may lead to a lack of knowledge and a higher risk of misconception.

Growing awareness of response to individual exercises was evidenced in the participants' ability to differentiate between the various responses to specific SOVT exercises. Some described a preference for a particular exercise, with recognition that certain exercises suited their voice or particular vocal challenges more effectively:

'I really enjoyed the siren glides because it felt really gentle and it felt like it was getting my voice really ready to sing, my voice felt much clearer and less breathy afterwards'
(participant 1).

'With the straw...I feel like it just helps my voice be really relaxed and removes all the tension' (participant 5).

Rather than indicating that any SOVT is universally superior for this community, the accounts recognise individuality in the use of the exercises and developing individual vocal awareness as to their perceived benefits. Importantly, participants appeared to be moving away from the notion of a warmup being a prescriptive fixed collection of exercises, rather a collection of

options where the use is dependent on the individual voice and any daily fluctuations. This is found in comments such as:

‘Sometimes I just go fast forward and do the straw exercises rather than the whole thing, as I found it made my voice feel freer and less tense’ (participant 6).

This is particularly interesting in the context of adolescence and established within theme 1; if participants are experiencing their voices as variable, dynamic instruments then it is appropriate that the requirements of a warmup routine would alter in line with variation to maximise efficacy. Developing awareness and an ability to independently respond to these daily variations may be of value to adolescent female singers, especially those navigating challenging musical theatre repertoire.

Not all participants demonstrated an initial positive response to the intervention with codes such as ‘unsure’ leading to an understanding of initial scepticism. Some participants were uncertain of the efficacy of the exercises, especially where they seemed simple or disconnected with the energetic sound they associated with musical theatre belt preparation. One participant commented:

‘at the beginning I couldn’t tell if the SOVTs were doing anything, it just seemed like making gentle noises, but then as I’ve gone on and seen a few days later, I’m starting to say that I think it’s helping’ (participant 4).

With another adding:

‘I was a bit unsure about doing them at first, because I felt like I didn’t really know what I was doing, it just seemed to be some random blowing into a straw’ (participant 2).

These responses are useful as they provide an important counterpoint to initial positive responses, not all participants began the intervention predicting positive outcomes. Subsequent reports of changed understanding emerged throughout the experience with participants who had initial scepticism developing a greater understanding. One participant reflected:

'At first I didn't like doing the straw exercises but then once I could feel them helping my voice and making it less tense that was my favourite exercise, it seemed to really work for my voice so I did it every day (participant 2).

The significance here is not that the participant has developed an accurate understanding of SOVT exercises physiologically, rather that they have developed a relationship between an exercise and their own vocal response. This can be interpreted through the concept of experiential learning. Brown (2025) explicitly argues that in contemporary voice pedagogy, singers should develop understanding through personalised, embodied and experiential learning; developing understanding through their own sensory experience and proprioception.

A clear physiological thread to this theme is that of confidence, appearing regularly throughout the coding process. Interestingly, comments around confidence were generally linked with recognition of physical experiences with participants linking confidence with increased perception of vocal control and predictability. One participant explained:

'I just think I'm not going to be able to belt if I'm having a bad day and then I'm worrying about doing it and then I just lose my confidence' (participant 5).

With another commenting:

'It definitely knocks my confidence when I thinking If I can or can't hit the note or if I'm gonna have a voice crack' (participant 6).

Both these responses suggest that the participants confidence is grounded in successful experience and vocal reliability demonstrating self-efficacy; an individual's belief in their capability to perform the actions required to reach the desired outcome (Bandura, 1997). This theoretical framework for self-efficacy was used in a study by Xu (2026) who explored the relationship between adolescent singers, self-efficacy and self-worth. Using Bandura's four sources of self-efficacy: mastery experiences (past success), vicarious experiences (observing others), verbal persuasion (social feedback) and physiological and emotional states (body and mood reactions), the study found that physiological states significantly predict singing self-efficacy and mastery experiences were positively related to perceived success. Where participants are describing a physiological state such as 'my voice feels free' with a mastery experience such as 'I was able to belt successfully' the repeated

experience of both contribute to a greater confidence in repeating the task again. This concept is also noted in a study by Gill, Osborne and McPherson (2024) who, when investigating music educators, found that positive self-perception contributes explicitly to subsequent musical achievement. Participant data appears compatible with this as responses describe how experiences of the intervention facilitating the conditions required for completing a vocally demanding task contribute to an increased belief in their ability to repeat the task. Rather than simply saying 'I felt more confident' some participants explained why:

'[the intervention] seemed to really work for my voice so I did it every day. Each day I was doing it I found I could belt better and more clearly so it made me feel more confident' (participant 2).

Confidence here is emerging after experiencing the voice being perceived as responding in a positive way, therefore approaching subsequent experiences with a different expectation. This is of particular significance when considering it alongside the theme of vocal uncertainty in adolescent singers who may be experiencing daily shifts in range, tone and clarity leading to a lack of predictability.

It is important to note, however, that confidence was not a universal construct, the continued presence of the code 'unsure' represents a narrative that not all participants experienced developing confidence in the same way. One participant explained:

'I'm unsure whether the warmup made a massive difference to the sound I was making every day. Sometimes it definitely sounded better especially if my voice was tired, but other days it still felt hard to belt' (participant 5).

This comment is interesting as it demonstrates that greater awareness can sometimes make participants more conscious of variability rather than simply more confident. Recognising the difference between specific days does not remove the uncertainty, rather it indicates that participants are perhaps better able to articulate when their voice felt different and make decisions accordingly. This adds nuance to the interpretation of confidence. The interventions pedagogical value may not be that adolescent singers respond with confidence that their voices will behave predictably, rather the intervention enables them to gain a

greater understanding of their personal variations and respond accordingly with appropriate warm up activities. Rather than confidence through consistency, the data perhaps represents confidence in knowing what to do when the voice is inconsistent. This greater understanding represents vocal autonomy, the ability to independently identify what the voice needs, what exercises would be useful and understand the degree of suitability of a particular approach. This is represented in comments such as:

‘I felt like the humming really worked for the middle part of my voice that can get quite breathy some days, it really helped it feel clear’ (participant 2).

This participant continued to describe how they would sometimes just complete the humming exercise as it was, in their opinion, most suited to their voice. This represents the emerging ability to connect the exercise to individual vocal need, rather than simply completing an exercise when instructed to by a teacher or video. This represents an important pedagogical outcome, where the adolescent singer is developing vocal autonomy and reducing the dependence upon teacher directed instruction. This is in line with contemporary vocal pedagogy which advocates for singers to have increased control over their own voice and learning, developing autonomy through increased confidence and empowered decision making (Higgins, 2026). This is also highlighted by Sherwood (2019) who directly links recognising their own sensations to greater confidence through self-regulation and autonomy. The development of autonomy raises an important question: would they continue to use the intervention? The final theme explores factors influencing engagement and barriers.

An intervention that adolescents will use

The final theme addressed the practical acceptability of the intervention, exploring the factors that influenced the participants’ willingness to engage. The preceding themes identify perceived vocal and educational benefits associated with the programme of SOVT warm up exercises, however in order for these benefits to be felt the participant needs to engage in a meaningful way. Accessibility, length, structure, privacy and time constraints all influenced how regularly participants completed the intervention. This theme moves beyond whether the intervention was perceived as beneficial, to consider whether an intervention of this kind could make a meaningful and realistic part of an adolescent singer’s vocal practise.

A prominent code within this theme was that of regularity. Participants differed in how consistently they completed the programme, highlighting a difference between intending to practise and incorporating practise into regular routines. For some the intervention provided a structure that encouraged greater consistency, as one participant commented:

'I really liked having the warmup video to do as it reminded me to keep practising and gave me a focus' (participant 1).

Another participant reflected:

'before you sent the videos I just used to warm up and practise once or twice between lessons, but this made me do it more often as I wanted to see if it made a difference' (participant 4).

These comments suggest that having a predetermined programme enabled participants to focus on independent vocal practise, reducing decision making as to which exercises to complete, in what range and for how long enabled them to follow the established sequence with ease leading to greater engagement. This led to the code 'structured warm-up' which shows a broader pattern of a positive reaction to engaging with the intervention. This is particularly interesting when considered alongside previous warm up habits. Throughout the interviews there was various mention of unstructured, unplanned warm up habits with inconsistency in outcome. One participant explained:

'I've done lots of straw exercises before from YouTube and from TikTok and Instagram but I feel like they're always random and some are better than others, just depended which one came up' (participant 6).

Another shared:

'[I liked] having that structured warmup to do rather than just picking a random YouTube video or like singing some random scales I remember from class' (participant 4).

These comments highlight that the intervention differed from some participants' previous routines not simply because it included SOVT exercises, but because those exercises were shared in a repeatable and structured sequence. For adolescent singers building daily habits and becoming autonomous learners this structure appeared to be an important component of acceptability.

The format of the intervention appears to have had a strong influence on engagement and acceptability. Codes such as video length, clarity, length and piano accompaniment all form an overall picture that format and accessibility is influenced by practical details. The intervention was being evaluated not solely on its vocal content, but how easy it was for the singers to incorporate into practise. Key phrases such as: *'I thought the videos were really clear'* (participant 3) and *'it was easy for me to follow along'* (participant 2) help to articulate this point. Video length was of relevance, this was something considered greatly in the design of the intervention in line with research into studies conducted by Fyfield, Henderson & Phillips (2022) and Fiorella (2021) as discussed in the literature review. Brame (2016) highlights that effective educational videos should manage cognitive load and maintain engagement through reduced length and clear presentation. Guo, Kim and Rubin (2014), when analysing 6.9 million educational video-viewing sessions, found that substantially greater engagement occurred when videos were shorter, with an optimal time of approximately 6 minutes or less leading to most effective engagement. This provides theoretical context for the participants' emphasis on video length.

The inclusion of piano accompaniment and the positive response to it, became an interesting code in the data with one participant articulating:

'it was good to be able to do it along with the piano. I thought that that was really helpful' (participant 3).

Piano accompaniment was providing clear structure and offering an external pitch reference to support progression across the range. The inclusion of piano accompaniment has been identified as one of the variables influencing accurate pitching in young singers (Hedden and Baker, 2010) while also assisting with pacing and making it seem more similar to previously experienced teacher-led warmups (Amir, Amir and Michaeli, 2005). Important here is the

perception of the efficacy of the piano accompaniment by participants, using the pitch reference to reduce cognitive load and focus on proprioceptive experience of the vocal task rather than independently generating required pitch sequencing.

One code of interest was the of the intervention being suitable for their voice, particularly when discussed in contrast to suitability of previous warmups from YouTube and social media. One participant explained:

‘The ones on YouTube...they start off really low but then they go really high quite quickly and I felt like I was struggling with the range (participant 6).

They go on to describe:

‘[the intervention] was in a really comfortable range and so I could actually concentrate on the exercise I was doing and how it felt rather than trying to hit the notes’ (participant 6).

This is particularly relevant when we consider the population of the present study. As identified in theme 1, adolescent singers experience fluctuations in range and reliability. A generic warm up designed for an unspecified adult or professional voice may therefore be unsuitable for the developmental needs of an adolescent female singer. The perceived suitability of the intervention may have contributed to the positive engagement, whilst the SOVT exercises are accessible in many locations online, having them in one structured programme intentionally designed for this community may have contributed to positive engagement. Whilst generally attempting to provide exercises in an appropriate range, we have established that vocal individualisation and fluctuating daily differences are a defining feature of adolescent female voice. Tan (2020) highlights that vocal instruction videos lack individualisation and professional feedback you would receive in one-to-one tuition and are therefore limited in efficacy. This is also articulated by Hutapea et al. (2026) who discusses that despite singers generally perceiving recoded vocal exercises positively, a lack of individual personalisation means they should be considered supplementary rather than replacement for professional training.

Participants repeatedly noted that they enjoyed completing the intervention, with the code 'enjoyed' appearing several times. Schäfer, Sander and Kopiez (2024) conducted a study involving 225 young singers and investigating how enjoyment of a singing activity impacted their engagement. Evidence within the study found that there is direct correlation between enjoyment of a singing activity and increased, regular engagement. Barrett and Zhukov (2023) also found, when investigating youth choirs, that perceived enjoyment of a singing activity is strongly associated with increased motivation for individual practise. This has important pedagogical implications; the consideration that an exercise may be theoretically appropriate but is unlikely to produce meaningful engagement if the participant does not find it enjoyable. Participants did not enjoy each exercise equally; some preferred straw phonation, others lip trills, humming or voices fricatives. This variation reinforces the individualised pattern identified in the previous theme. Participants increasingly recognised which exercises felt most suitable for their own voice. This highlights a challenge of the balance between structure and personalisation; a structured video provides guidance and consistency, whilst individual vocal fluctuations may require personalisation.

A code that was of relevance in this theme was that of barriers to independent practise. Positive perception of the intervention did not automatically result in consistent engagement due to several barriers articulated by participants. Barriers included: difficulty, forgetting, lack of rehearsal space, embarrassment, technology issues and lack of time. One participant described:

'I kept forgetting and I didn't really have any space to myself' (participant 3).

Another explained:

'I didn't really have any space to myself to complete the videos' (participant 1).

The code 'embarrassed' and 'crazy sounds' provide an interesting example of a barrier to implementation. Exercises such as lip trills, straw phonation and voiced fricatives encourage singers to create sounds that may feel unusual outside of vocal lessons. Silvey (2014) discussed how adolescent singers can feel self-conscious or embarrassed when asked to make unfamiliar and experimental vocal sounds. This study was based in a community of choral singers in guided sessions, but findings in this data appear to suggest that this feeling of embarrassment may transfer to independent practice. This finding highlights the

distinction between acceptability in principle and feasibility in practice; a participant may recognise the intervention as helpful and enjoyable, while simultaneously struggling to find the privacy, time or motivation required to engage with it consistently.

Perhaps the strongest indication of acceptability was evidence that participants were using elements of the intervention independently; outside of the study. For example:

'I've been in a show this last weekend and I decided to use it the straw phonation exercises before the show' (participant 4).

This participant continues to say:

'I think it [the intervention] is really helpful...I'm going to keep doing them in the future' (participant 4).

These comments should not be overstated, certainly the odd report of voluntary continuation does not demonstrate long term engagement, however they provide a picture of movement from researcher-directed participation towards self-directed use. This links with the preceding theme of vocal autonomy; participants who understood and experienced the perceived benefit of how an exercise affected their voice was potentially better positioned to make informed decisions about incorporating it into their regular practise routine. Acceptability therefore went beyond making the intervention enjoyable and clear to follow, it was about providing exercises that participants considered sufficiently useful to engage with regularly.

Moving towards a pedagogical model for SOVT-informed adolescent belt

Taken together, the findings suggest that the pedagogical application of SOVT exercises may extend beyond their use as a conventional vocal warm-up. A five-stage process is proposed from the findings of this present study:

Assess – Prepare – Transfer – Reflect – Individualise

This model positions SOVT work as a means through which adolescent singers can both prepare the voice and develop perceptual skills required to manage vocal tasks with increasing independence. The first stage; **Assess**, acknowledges the day-to-day vocal

variability identified in the data. Rather than assuming voices will always respond in the same way, singers and teachers are encouraged to recognise the current comfort level, range and vocal quality of the voice rather than assume predictability – what worked in last weeks lesson may not work today. **Prepare** involves the use of appropriately selected SOVT exercises to establish sensations associated with vocal readiness, efficient production and reduction in tension. **Transfer**, the third stage, is of great importance: SOVTs are not treated as an end point, but progressively lead to the target vocal behaviour of Musical Theatre Belt. During the transition, attention can be given to any unnecessary tension, breath forcing or pushing as the vocal demand increases. **Reflect**, draws upon increased kinaesthetic awareness evident in the findings. Rather than a teacher simply informing the singer if the attempt was successful, questions such as ‘what changed?’, ‘where do you feel effort?’ and ‘what happened when you moved from the SOVT into the phrase?’ encourage the adolescent singer to identify sensory characteristics. Finally, **Individualise** recognises that adolescent voices develop on an individual level, with responses to specific SOVT tasks varying across individual voices. Through repeated experience and reflection, singers can be encouraged to recognise which exercises are useful for their individual voices and incorporate them into manageable independent routines.

The proposed model shifts the pedagogical function of SOVTs from teacher-prescribed exercises towards a tool for developing vocal self-awareness. It’s intended outcome is not an adolescent singer who can reproduce a fixed warm-up routine, but one who can recognise the current condition of their voice, select an appropriate strategy, monitor the transfer into demanding vocal production and evaluate the outcome. This may be particularly relevant during adolescence where the capacity to respond to vocal variability is a key pedagogical aim. This proposed model could form the basis of a professional development resource for singing teachers working with adolescent musical theatre performers. Dissemination could initially include presentation of the findings, followed by development of a concise practitioner resource explaining the assess-prepare-transfer-reflect-individualise model. The video format used within the intervention also provides a potential route for future application. Participants’ response to the resource could inform the development of a refined set of adolescent-specific resources for independent practice. Rather than presenting these as generic warm-up videos, future resources could incorporate prompts encouraging singers to monitor vocal sensation, tension and perceived effort, embedding reflection within the resource. Future research could elevate the proposed pedagogical model with larger and more diverse populations, combining participants’ experience with acoustic, aerodynamic and physiological measures. This would enable further investigation into perceived reduction

of effort and changes in vocal control to assess their correspondence with measurable changes in vocal function.

CONCLUSION

The findings of this study suggest that a programme of SOVT exercises may have value within the preparation of adolescent female voice for belt, not due to an ability to reproduce physical demands of belt production, but because participants perceived them as establishing a more manageable starting point from which to approach vocally demanding tasks. Across the four themes participants described navigating day-to-day variability within the adolescent voice, experiencing increased vocal readiness and reduced perceived effort when producing belt following the intervention. Vocal awareness increased alongside vocal trust and confidence with participants identifying parts of the intervention that could realistically be incorporated into their regular practise routine. Taken together, these findings position SOVT exercises not as an isolated technical solution, but as one component of a broader pedagogical approach to developing sustainable and increasingly independent adolescent singers.

The first theme highlighted the adolescent female voice as a variable and fluctuating instrument that is personal to each singer. Regular; often daily fluctuations in range, breathiness, fatigue and general reliability were strongly reported within the data and literature review. This has an important pedagogical implication: vocal training for adolescents needs to be responsive and adaptive rather than assuming consistent vocal function – what works one day, may not be suitable for the next. Teachers must therefore consider what the singer is technically capable of achieving and how this may fluctuate across subsequent days and weeks. A planned warm up intervention may therefore not only act as a preparation, but also as a means of personal assessment, enabling the student to establish how their voice is responding on a particular day before progressing to more demanding vocal tasks such as belting. The findings do not suggest that SOVT exercises contribute to belt training, instead participants described the progression from vocal readiness gained from the exercises to experiencing belt with less perceived effort. Sensation based descriptions such as feeling warm, ready and free translated to descriptions of reduced tension, efficient breath use and increased control. Some participants also described their sound as stronger or brighter despite reporting reduced

perceived effort challenging the misconception that vocal intensity is achieved through physical force.

Findings support a pedagogical distinction between preparing for belt and practising belt technique. SOVT exercises may provide useful preparatory conditions, but do not address specific respiratory, laryngeal and acoustic demands of belt singing. This is in line with the contradiction in literature surrounding the favourable source-filter interaction associated with SOVT exercises (Titze, 2006) and the high intensity, resonance dependent characteristics associated with belting (Bourne and Garnier, 2012). The suggestion is therefore that the perceived preparatory benefits of SOVT exercises remain without replicating the specific physiological characteristics of the desired vocal quality. One of the most significant findings was in the participants experience of developing greater awareness of their individual voices. This suggests the pedagogical value may lie in what singers learn through experiencing it. Rather than completing an exercise because it has been prescribed by a teacher or video, participants began to identify how particular exercises affected their voice and what particular strategies worked for them individually. This has particular significance in the community of adolescent female voice, which is characterised by ongoing development and daily variability. The pedagogical aim is therefore not to strive for developing a voice that always feels predictable, but equipping them with knowledge of how to recognise those variabilities and make informed decisions of how to respond. This aligns with Bandura's concept of self-efficacy, where repeated successful experiences contribute positively to the individuals belief in their ability to manage future tasks. This growth in vocal autonomy moves the pedagogy from prescriptive direction to vocal understanding and knowledge of their own instrument. The final theme demonstrated that pedagogically effective exercises are of limited value unless adolescents engage with them in a positive way.

Collectively, the findings suggest several important pedagogical considerations in the application of SOVT exercises with adolescent female musical theatre singers: SOVTs should be understood as preparation for, rather than replication of belt; exercises should be responsive to individual day-to-day vocal variability; attention to be given to sensations of tension and perceived effort when transitioning into belt; singers should be encouraged to evaluate and understand their personal response to an exercise; and resources should be designed with adolescent engagement in mind. The findings do not demonstrate that SOVT exercises physiologically improve adolescent belt production; such conclusions would require gathering of aerodynamic, acoustic and laryngeal measurements. Rather, this study

provides insight into how adolescent female singers experience SOVT exercises as a preparation for belt. Participant descriptions suggest that the potential pedagogical value of SOVTs in this specific community lies not in preparing the vocal mechanism, but in creating a structured process where singers can experience perceived ease, explore efficient phonation and understand their own voice. Ultimately, the findings suggest a pedagogical model in which the teacher's role is not to teach how to belt, but to provide opportunity for singers to understand how to prepare for belt, how to recognise unnecessary effort, how to respond when the voice fluctuates and how to develop independent strategies. This approach has a longer-term goal of developing confident, informed and autonomous young singers. The development of a five-stage pedagogical model: assess-prepare-transfer-reflect-individualise; provides a forward-facing outcome of this study, translating findings beyond the immediate participant group into a framework with potential relevance for the wider voice pedagogy community. The model offers a practical way in which the findings can be disseminated to singing teachers working with adolescent female voice. The model can be shared through CPD practitioner workshops and professional voice networks to broaden the discussion around the role of SOVT exercises. Importantly, this model does not represent a prescriptive, universally applicable method, rather a pedagogical framework that can be explored, adapted and critically evaluated by practitioners. Dissemination within the teaching community could therefore create opportunity for further feedback and research, enabling the model to evolve in response to wider teaching contexts. This study has the potential to contribute to the discussion surrounding adolescent female voice development alongside the translation of research into accessible and reflective pedagogical practice.

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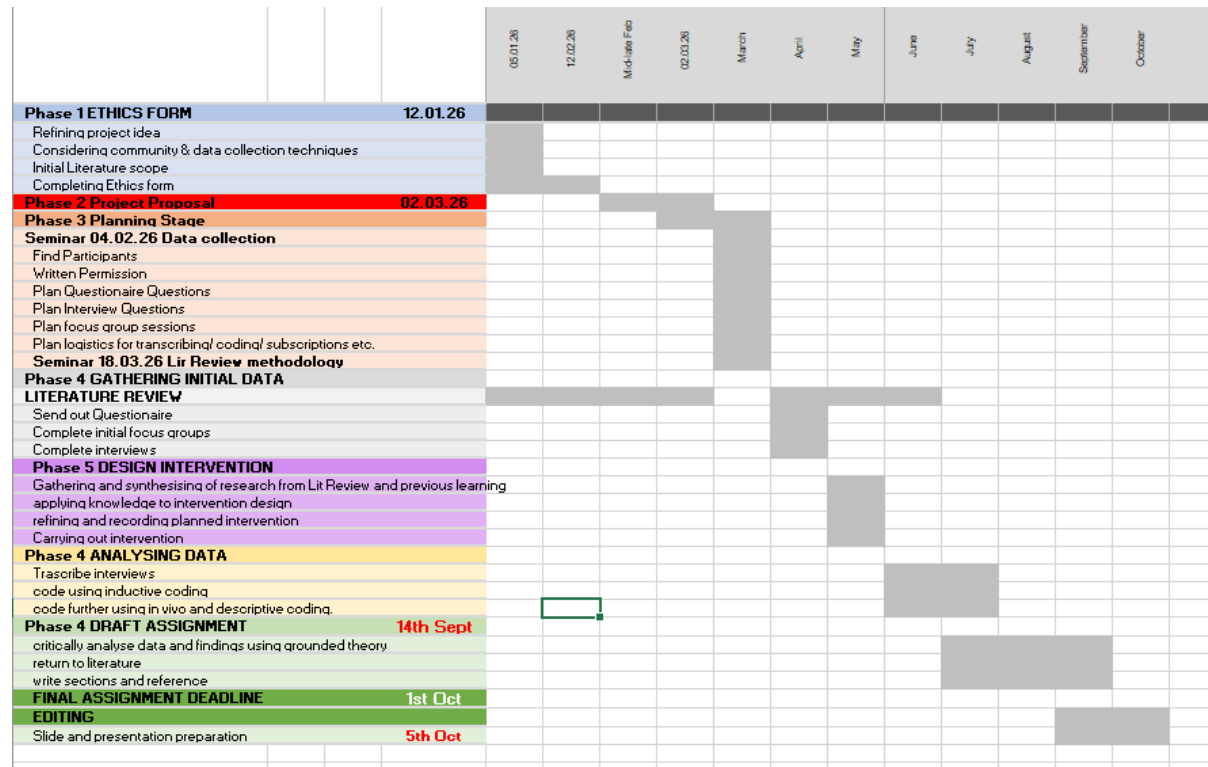
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APPENDIX 1: GANTT CHART



APPLICATION FOR ETHICAL APPROVAL

RESEARCH STUDENTS

This form is to be completed by the student within **SIX** months for full-time students and **TWELVE** months for part time students, after the commencement of the research degree or following progression to Part Two of your course.

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

This document is also available in Welsh.

RESEARCH 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.

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.

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.

SECTION A: About You (Principal Researcher)

1	Full Name:	Hannah Jane Strong			
2	Tick all boxes that apply:	Member of staff:	☐	Honorary research fellow:	☐
	Undergraduate Student	☐	Taught Postgraduate Student	☒	Postgraduate Research Student
3	Institute/Academic Discipline/Centre:	WAPPAR			
4	Campus:	Carmarthen			
5	E-mail address:	hannahstrongvocal@hotmail.com			
6	Contact Telephone Number:	07842343330			
For students:					

7	Student Number:	2245368
8	Programme of Study:	MA in Professional Practice (Voice Pedagogy)
9	Director of Studies/Supervisor:	Louise Emanuel/ Julie Crossman/ 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	☐		
		Institute Research Committee	☐		
		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, location-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. You may add rows to this table if needed.	
1	UWTSD Research Ethics & Integrity Code of Practice	☒
2	UWTSD Research Data Management Policy	☒
3	[List any other relevant documents here]	☐

SECTION D: External Collaborative Research Activity

If there are external collaborators then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators then leave this section blank and continue to section E.

1	Institution	
2	Contact person name	
3	Contact person e-mail address	
4	Is your research externally funded?	YES ☐ NO ☐
5	Are you in receipt of a KESS scholarship?	YES ☐ NO ☐
6	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Voluntary YES ☐ NO ☐
7		Employed YES ☐ NO ☐

8	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	☐
9	Has 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

10	Does this organisation have its own ethics approval system?	YES	☐	NO	☐
	If Yes, please attach a copy of any final approval (or interim approval) from the organisation (this may be a copy of an email if appropriate).				

SECTION E: Details of Research Activity

1	Indicative title:	Designing a programme of SOVT exercises for developing healthy and efficient belt technique in Musical theatre singers aged 17-19	
2	Proposed start date:	10.02.26	Proposed end date: 01.10.26
	Introduction to the Research (maximum 300 words per section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below: <i>Purpose of Research Activity</i> <i>Proposed Research Question</i> <i>Aims of Research Activity</i> <i>Objectives of Research Activity</i> Demonstrate, briefly, how Existing Research has informed the proposed activity and explain <i>What the research activity will add to the body of knowledge</i> <i>How it addresses an area of importance.</i>		
3	Purpose of Research Activity To develop a programme of SOVT exercises and assess their effectiveness in promoting healthy and efficient belt technique in Musical Theatre singers aged 17-19. I will be using research participants from my personal voice studio. There are a plethora of resources for SOVT exercises, but these are often not tailored to the specific community of 17-19 year old musical theatre singers. This research aims to use knowledge gained from desktop research in my previous module and test in a real life work based setting. (this box should expand as you type)		
4	Research Question Which SOVT exercises are most effective in developing healthy and efficient belt technique in Musical Theatre singers aged 17-19. (this box should expand as you type)		
5	Aims of Research Activity To be able to support my students in developing belt technique and give them effective SOVT vocal exercises to use both in vocal lessons and at home.		

	(this box should expand as you type)
6	Objectives of Research Activity Seek to understand the general awareness of SOVT exercises in the community of 17-19 year old Musical Theatre singers. Seek to understand the impact of varying SOVT techniques with research participants. I will aim to consolidate previous learning in to SOVT exercises and belt technique within this community. Seek to understand the impact of various SOVT interventions on healthy and efficient belt technique. (this box should expand as you type)
	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. You do not need to justify the methods here, but should instead describe how you intend to collect the data necessary for you to complete your project.
7	I propose to collect Qualitative data. Focus groups – participants selected who are within the community of the project, 8-10 singers from my vocal studio. This will be recorded and transcribed. Questionnaire – to gather information about students previous knowledge of SOVT exercises. Interviews – Semi structured interviews before and after any interventions to see how they feel about the exercises. Participant diaries – to gather information about feelings towards interventions and emotional response. Any audio/video recordings of interviews with participants will be in compliance with GDPR/DPA2018. Observations – how does the students belt technique sound, do they seem confident and relaxed, are the interventions a positive experience. I will be keeping a diary to note my observations and for ethnographic review. Literature review – desktop research into relevant topics. (this box should expand as you type)
	Location of research activity Identify all locations where research activity will take place.
8	Hannah Strong Singing Studio, Kendal, UK. (this box should expand as you type)
	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. If you live in the country where you will do the research then please state this.
9	N/A <i>(this box should expand as you type)</i>

10	Use of documentation not in the public domain: Are any documents NOT publicly available?	NO	☒
		YES	☐
11	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 the current data protection law of the country in question and that of England and Wales. <i>(this box should expand as you type)</i>		

	Does your research relate to one or more of the seven aims of the Well-being of Future Generations (Wales) Act 2015?	YES	NO
12	A prosperous Wales	☐	☒
13	A resilient Wales	☐	☒
14	A healthier Wales	☐	☒
15	A more equal Wales	☐	☒
16	A Wales of cohesive communities	☐	☒
17	A Wales of vibrant culture and thriving Welsh language	☐	☒
18	A globally responsible Wales	☐	☒
19	If YES to any of the above, please give details: <i>(this box should expand as you type)</i>		

SECTION F: Scope of Research Activity

	Will the research activity include:	YES	NO
1	Use of a questionnaire or similar research instrument?	☒	☐
2	Use of interviews?	☒	☐
3	Use of focus groups?	☒	☐
4	Use of participant diaries?	☒	☐
5	Use of video or audio recording?	☒	☐
6	Use of computer-generated log files?	☒	☐

7	Participant observation with their knowledge?	☒	☐
8	Participant observation without their knowledge?	☐	☒
9	Access to personal or confidential information without the participants' specific consent?	☐	☒
10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
11	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
12	Investigation of participants involved in illegal activities?	☐	☒
13	Use of procedures that involve deception?	☐	☒
14	Administration of any substance, agent or placebo?	☐	☒
15	Working with live vertebrate animals?	☐	☒
16	Procedures that may have a negative impact on the environment?	☐	☒
17	Other primary data collection methods. Please indicate the type of data collection method(s) below.		
	Details of any other primary data collection method:	☐	☒
(this box should expand as you type)			

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

If there are no participants then do not complete this section, but go directly to section H.

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

	Participant numbers and source Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?	
10	How many participants are expected?	8-10 <i>(this box should expand as you type)</i>
11	Who will the participants be?	Within the community of 17-19 year old musical theatre singers. <i>(this box should expand as you type)</i>
12	How will you identify the participants?	From my personal singing studio clients. <i>(this box should expand as you type)</i>

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

	Information for participants:	YES	NO	N/A
24	Will participants be paid?	☐	☒	☐
25	Is specialist electrical or other equipment to be used with participants?	☒	☐	☐
26	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
28	If YES to any question, please provide full details			
	Using camera/ voice recoding equipment to record interviews and focus groups. Transcription software (dictate) used for transcription and Delve software used for coding.			

	(this box should expand as you type)
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SECTION H: Anticipated Risks

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.		
1	Full risk assessment completed and appended?	Yes ☐
		No ☒
2	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information	
	Risk to participants: Feelings of coercion to take part and/or remain in the project as I am their teacher and they will want to please me. Emotional distress when trying new exercises and techniques that may come from feeling anxious. Risk of vocal strain and damage if exercises performed incorrectly. (this box should expand as you type)	How you will mitigate the risk to participants: Ensure participants are aware participation is optional and can be withdrawn at any time. Discuss this risk with the participant and the parent/guardian and provide support as necessary. Enable participants to withdraw at any time. Follow evidence-based suggestions and observe any vocal changes, looking for discomfort and stopping immediately if any vocal issues arise. Advise participants about referral to specialist vocal health teams if necessary. (this box should expand as you type)
3	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 (this box should expand as you type)	
4	Risks to the investigator For example: personal health & safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest	
	Risk to the investigator: Risk of accusation of impropriety. Putting students in a position where they feel uncomfortable. (this box should expand as you type)	How you will mitigate the risk to the investigator: Ensure participant or parent/guardian has given permission, remind of permission to refuse a new exercise or withdraw from taking part at any time. (this box should expand as you type)
5	University/institutional risks	

	For example: adverse publicity, financial loss, data protection	
	Risk to the University: Risk of breach of data protection. <i>(this box should expand as you type)</i>	How you will mitigate the risk to the University: All data anonymous and coded. Originals stored on my laptop that is password protected and only accessed by myself. <i>(this box should expand as you type)</i>
6	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems	
	Risk to the environment: N/A <i>(this box should expand as you type)</i>	How you will mitigate the risk to environment: <i>(this box should expand as you type)</i>

Disclosure and Barring Service				
	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
7	Does your research require you to hold a current DBS Certificate?	☒	☐	☐
8	If YES, please give the certificate number. If the certificate number is not available please write "Pending"; in this case any ethical approval will be subject to providing the appropriate certificate number.	001840625220		

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 my email address that they will be able to contact for further details or results. <i>(this box should expand as you type)</i>
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. Have the participant (if over 18) or parent/ guardian (if under 18) sign an appropriate consent form. Request verbal consent from the individual participants with a clear description of the intended research project. These forms will count as personal data and should be noted as such in section J <i>(this box should expand as you type)</i>
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, but coded. All permission forms will need named, but these will be stored on my password protected laptop and names will be redacted before submitting as an appendix on my paper. <i>(this box should expand as you type)</i>

SECTION J: Data Protection and Storage

	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
1	"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. Any video or audio recordings of participants is considered to be personal data.	x	☐
	If YES, provide a description of the data and explain why this data needs to be collected:		
2	I will be collecting names and emails on consent forms and audio/ visual data of participants. <i>(this box should expand as you type)</i>		
	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	"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).	x	☐
	If YES, provide a description of the special category data and explain why this data needs to be collected:		
4	Depending on participants chosen I may collect data on mental health issues such as anxiety or barriers to learning such as dyslexia or ADHD is this may have an impact on the feelings of the participants using new interventions and techniques. <i>(this box should expand as you type)</i>		

	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?	☒	☐
6	University computers?	☐	☒
7	Private company computers?	☐	☒
8	Home or other personal computers?	☒	☐
9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☒	☐
10	"Cloud" storage or websites?	☐	☒
11	Other – specify:	☐	☒
12	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of backup procedures, password protection, encryption, anonymisation and pseudonymisation: All data will be kept in password protected computer storage on my laptop which will not be shared. Audio/visual data will be transcribed and would be shown to participants to check accuracy of reporting. Any USB sticks used to store or transfer data will be password protected. All participants		

	will be given a unique identifier to ensure confidentiality and this list will be kept securely in the password protected folder. <i>(this box should expand as you type)</i>
--	--

Data Protection			
	Will the research activity involve any of the following activities:	YES	NO
13	Electronic transfer of data in any form?	☒	☐
14	Sharing of data with others at the University outside of the immediate research team?	☐	☒
15	Sharing of data with other organisations?	☐	☒
16	Export of data outside the UK or importing of data from outside the UK?	☐	☒
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☒	☐
18	Publication of data that might allow identification of individuals?	☐	☒
19	Use of data management system?	☐	☒
20	Data archiving?	☐	☒
21	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and Data Protection Act (2018) (and any international equivalents, where appropriate): All data will be encrypted and kept in password protected laptop which will not be shared. Any USB sticks used to store or transfer data will be password protected. All data transfers will be encrypted and password protected. 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. <i>(this box should expand as you type)</i>		
22	List all who will have access to the data generated by the research activity: Myself, the principal researcher Supervisor and Moderator. <i>(this box should expand as you type)</i>		
23	List who will have control of, and act as custodian(s) for, data generated by the research activity: Myself, the principal researcher. <i>(this box should expand as you type)</i>		
24	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 laptop which will not be shared. Any USB sticks used to store or transfer data will be password protected, and will be reformatted at the end of the project in order to destroy the data. The data will be stored until the completion of the project and then deleted. <i>(this box should expand as you type)</i>		

25	Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. <i>(Most relevant to academic staff)</i>		
	N/A <i>(this box should expand as you type)</i>		
26	Confirm that you have read the UWTSD guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	YES	☒
27	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	☒

SECTION K: Declaration

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/	
1	Signature of applicant:  Date: 10.01.2026

For STUDENT Submissions:

2	Director of Studies/Supervisor:	Debbie Winter	Laura James	Date: 25-02-2026
3	Signature:	Laura James		

For STAFF Submissions:

4	Academic Director/ Assistant Dean:		Date:
5	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 (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.

RESEARCH STUDENTS ONLY

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

RESEARCH 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.



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

PG2 / E1 FORM

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.

APPENDIX 3: PERMISSION SLIPS (redacted)

From company:



Hannah Strong Vocal Tuition
20 Spital Park
Kendal
Cumbria
LA9 6HG

10.01.2026

Dear UWTSD,

RE: SOVT Exercises for belt technique in adolescent Musical Theatre singers

I confirm that I approve of the research proposed into 'SOVT Exercises for Belt Technique' to be carried out by Hannah Strong of Hannah Strong Vocal Tuition during private lessons with the company between February and March of 2026.

Kind Regards,

Hannah Strong

From Participants:

CONSENT FORM TO SIGN AND RETURN

Participant Name: [REDACTED] Participant D.O.B [REDACTED]

Participant Signature: [REDACTED] Date: [REDACTED]

Parent/ Guardian name (if under 18): [REDACTED]

Parent/ Guardian Signature (if under 18): [REDACTED] Date: 3/5/26

Principal Researcher Signature: [REDACTED] Date: 3/5/26

This research project has received ethical approval from the University of Wales Trinity St. David in collaboration with the Voice Study Centre as part of a Professional Master's Degree in Voice Pedagogy.



CONSENT FORM TO SIGN AND RETURN

Participant Name: _____ Participant D.O.B _____

Participant Signature: _____ Date: 02.05.2026

Parent/ Guardian name (if under 18): _____

Parent/ Guardian Signature (if under 18): _____ Date: 5.5.26

Principal Researcher Signature: HJ Smory Date: 5.5.26

This research project has received ethical approval from the University of Wales Trinity St. David in collaboration with the Voice Study Centre as part of a Professional Master's Degree in Voice Pedagogy.



CONSENT FORM TO SIGN AND RETURN

Participant Name: [REDACTED] Participant D.O.B [REDACTED]

Participant Signature: [REDACTED] Date: 2/5/26

Parent/ Guardian name (if under 18): [REDACTED] [REDACTED]

Parent/ Guardian Signature (if under 18): [REDACTED] Date: 2/5/26

Principal Researcher Signature: [Signature] Date: 4/5/26

This research project has received ethical approval from the University of Wales Trinity St. David in collaboration with the Voice Study Centre as part of a Professional Master's Degree in Voice Pedagogy.



CONSENT FORM TO SIGN AND RETURN

Participant Name: _____ Participant D.O.B _____

Participant Signature: _____ Date: 2/5/2026

Parent/ Guardian name (if under 18): _____

Parent/ Guardian Signature (if under 18): _____ Date: 4/5/26

Principal Researcher Signature: HJ Strong Date: 4/5/26

This research project has received ethical approval from the University of Wales Trinity St. David in collaboration with the Voice Study Centre as part of a Professional Master's Degree in Voice Pedagogy.



CONSENT FORM TO SIGN AND RETURN

Participant Name: [REDACTED] Participant D.O.B [REDACTED]

Participant Signature: [REDACTED] Date: [REDACTED]

Parent/ Guardian name (if under 18): [REDACTED]

Parent/ Guardian Signature (if under 18): [REDACTED] Date: 1/5/26

Principal Researcher Signature: [Signature] Date: 2/5/26

This research project has received ethical approval from the University of Wales Trinity St. David in collaboration with the Voice Study Centre as part of a Professional Master's Degree in Voice Pedagogy.



CONSENT FORM TO SIGN AND RETURN

Participant Name: _____ Participant D.O.B _____

Participant Signature: _____ Date: 01-05-26

Parent/ Guardian name (if under 18): _____

Parent/ Guardian Signature (if under 18): _____ Date: 1/5/26

Principal Researcher Signature: H. Strong Date: 1-5-26

This research project has received ethical approval from the University of Wales Trinity St. David in collaboration with the Voice Study Centre as part of a Professional Master's Degree in Voice Pedagogy.



APPENDIX 4: Link to Warm up Video

[Warm Up video link please click here.](#)

APPENDIX 5:

Predetermined areas of discussion in Interview Questions.

What would you first like to share about the experience?

(gives the participant chance to begin with what they feel is most important)

- Follow up as required

How often did you complete the exercises?

- Did they complete full videos
- Was this in line with how often they used to practise before?
- Did they do just the video or additional warm ups instead?

Did you notice any changes after completing the warm up?

- Long term/ short term
- Positive and negative
- Ask for descriptive words.

Did any of the exercises feel particularly helpful or challenging?

- Why?
- Previous experience

From your initial questionnaire you said the following about your belting (link to personal participant). Is there any change in this?

- Stamina
- Comfort
- Sound

Establish SOVT knowledge.

- Understanding
- Previous experience
- Anything changed

Anything else they would like to share/ discuss. Anything else in your diary entries.

APPENDIX 6:

Participant Transcripts – Raw unedited transcripts from 'dictate' app.

Participant 1

Thank you that's us now recording. What would you first like to share about the experience?

Yeah I really enjoyed doing the videos. It encouraged me to practice more often and I normally only practice a couple of times a week so having that as a focus helped me make sure I was practising which was good and I liked the videos because I usually just use random YouTube videos or like videos on like TikTok with like people doing warmup so this was good as it felt more suitable for my voice in my range cause sometimes the warm-ups go too high or too low.

Thank you. That's great to hear you've been doing lots of practice and that the videos helped facilitate that that's fantastic. How often did you find you were completing the exercise? Obviously it made you practice more with you doing the exercises every time you practice

Yes I did the videos at the start of each practice. I did like the full video each time sometimes I would like go over and do like other exercises in it twice to make my warmup a bit longer if like if it was in the morning or something and it was taking me awhile to get going .

Did you do any extra warm-ups on top of this video or did you just do this video?

I did like some breathing and some stretching and like tension releasing stuff but this was the only like and like actual vocal part of the warmup that I did thank you.

Did you notice any changes after complete in the warmup? Like did it make your voice feel different or did it make your practice feel different?

I mean I think a warmup always helps. I definitely feel like my voice felt ready to sing. I was surprised because I usually do lots of scales and things so I didn't think I was doing too much to warm up my voice, but then when I started singing my voice felt like really warm and really able to sing and I could sing hi much easier which was good. I feel like then when I was singing I could sing for longer without my voice getting tired which was good. I felt like my voice had more energy.

That's great thank you. Have you got any words that you might use to describe how your voice felt after doing the videos?

I would say it felt warm energised flexible and fast moving.

Did you find any of the exercises particularly helpful? Was the one that was more helpful than you saw was the one that you found more challenging than the others?

I really enjoyed the the siren glides because it felt really gentle and it felt like it was getting my voice really ready to sing, my voice felt much clearer and less breathy afterwards. I found the voice fricatives hard because that was new and I've not experienced those before so that was a little bit challenging . but I actually think they really helped me feel ready to do more of the speech quality stuff because like it felt like it was warming up my consonant as well.

Thank you so from your initial questionnaire you said that you felt fairly confident in belting has anything changed since doing this ?

I definitely think I feel more confident in my belting. I feel like with my warmup I felt like my voice just felt more comfortable like I could. I don't know like my voice didn't feel as tired so I could definitely sing for longer night I think it sounded better and I didn't get any like . tiredness in my voice. I didn't get a sore throat when I was singing and I think it's because I'd warmed up really well before I sang thank you.

So obviously this whole exercise is about SVTs and I noticed from your questionnaire that you have had some knowledge and experience of those before so where does your understanding of SVTs come from and how to use them before this video?

Normally just from TikTok and Instagram? I watch videos and reels of like people using SOVTs and do straws to make their voice stronger and to make them sound better, but I haven't done much of them myself before other than copying stuff off TikTok but I don't know if I was doing it correctly so it was good to do the videos and then I could work along with it and have you got any more knowledge of SVTs since this experience? Yeah I now know that humming is an SVT and I used to think it was just straws so I know that it's like humming and sign in in the fricative since the voice fricatives I feel like they're really easy SVTs to use rather than if you can't afford to get a straw, so which I don't have some that was really good.

Thank you and is there anything else you'd like to share or discuss or anything else you wrote in your diary that you'd like to discuss?

Just really how I feel after I've done the warm-ups I feel like I could be much higher like I think before when I used to be my voice used to get tied so quickly . I would always get like a breathy tone and not be able to sing strongly like when it got to like the end of us a song I would like a big bit at the end and my voice would feel tired by that point so by doing this like this warmup my voice felt really warmed up and kind of felt relaxed. I usually get a lot of tension in my voice especially when belting, but this made it feel relaxed and made me feel like I could hit the belt easier and manage to go higher. I really liked having the warm up video to do as it reminded me to keep practising and gave me a focus.

That's great. I'll turn the recording off thank you.

Participant 2:

Thank you that's the recording now going

Is there anything you would like to 1st share about the experience?

Just that I found the videos really helpful. It was really good because they were really clear and just sure and just really targeted and they were like a really good range for my voice, so it was easy for me to follow along ..

Thank you that's great to hear you found them helpful. Have used any similar videos before or was this the first time you'd used anything like this?

I've used some YouTube videos before that have been okay for doing scales but nothing that had any SVTs so this felt really helpful, but I was a bit unsure about doing them at first . because I felt like I didn't really know what I was doing, it just seemed to be some random blowing into a straw and I didn't want anyone to hear me making crazy sounds but once I got into using them, I really enjoyed doing it.

That's great to hear that you found your confidence with them. Is there anything particular that made it hard to start engaging with the videos ??

Nothing particular just practising at home. I always find quite hard because people might hear me so just took me a little while to get used to practising like some of the like voice fricative sounds with people being able to hear.

That's completely understandable and thank you for trying something new and trusting the experience so that's that's really Great so how often did you find that you were completing the exercise exercises?

At first only about like I did it in once in the first week and then I then started to do it every couple of days cause I had to practice for doing a performance and then I feel like it really helped so this last week I've been doing it every day and then doing a little bit of practice every day and I feel like that's been really helpful.

That's great to hear. Did you complete the full video each time or just pick particular exercises?

I completed the full video every time because it was just nice and short so it meant that I could just do that warmup and know that you know I've done enough to warm up my voice. At first I didn't like doing the straw exercises but then once I could feel them helping my voice and making it less tense that was my favourite exercise, it seemed to really work for my voice so I did it every day. Each day I was doing it I found I could belt better and more clearly so it made me feel more confident.

That's great to hear. Is that more often than you used to practice before I used to warm up before your practice in the past

Yeah sometimes I didn't even warm up at all. I just used to practice. I'll sing whenever so it's definitely helped me stick to having a warmup routine ..

Thank you so we're gonna talk now but what sort of changes you noticed after doing the warmup in terms of your actual voice did anything feel different at all?

I would definitely feel that my voice feels Free, it felt easier to sing and normally I get quite a sore throat . Days are different, somedays I can sing for a long time, other days it feels really hard and like all my neck can feel quite tense and it's like quite hard to to sing particularly like when I'm doing my belt stuff and it's quite a long song I can't find that quite hard where I feel like after I've got into doing the warm-ups my voice felt really warm and it was just like yeah it was easier to sing and I felt like I could do more changes between registers a bit easier like I could flipping and out a little bit easier I felt like had a bit more control which was good. I think the high notes were so much better like I just feel like I could sing high much easier and normally I would probably feel quite tired after doing a singing practice but I definitely feel like I could go for longer like my voice didn't didn't feel tired really just kept feeling strong right right the way through which was really good.

That's great to hear. Thank you for sharing that and it sounds like you've had a really positive experience. Was that you think any of the exercises were particularly helpful for That . improvement?

I just think it was just the whole thing of having a specific warmup to do when I think that my voice definitely felt relaxed after the the humming and the siren in it just it made it feel really warm and I don't know it felt I don't kind of felt like I could breathe easier so yeah that was really good.

I noticed you said on your initial questionnaire. You didn't really feel that confident in your belting before has anything changed since you have taken part in this research

I definitely feel like my belt feels easier. I feel more confident with belt in but I don't know whether that was because I was doing these warm-ups or whether it's just because I was doing a warmup, you know cause normally I just go straight into singing so I think just by warming up anyway that's really helped me but I don't know if it was like the SVT . warmup or just a warmup in general so it's definitely made me think that I do need to make sure that I do a little bit that you know regularly but I think it definitely helped. It's hard to say because some days I can just belt really well and other days it just feels like I can't do it, like my voice is tired and I can't make the sound and I'll just have a voice crack.

Thank you so obviously you're mentioning your SVT is there and I noticed from your questionnaire that you did have a little bit of knowledge of SVT's previously is that something that you've got from somewhere specific?

Really just from YouTube and yeah TikTok loads of people talk about how important SVTs are and how they can make your voice feel free, so yeah I just I just know it from that really and obviously things that we've done at college and where it's mentioned as well.

Thank you. Is there anything else that you'd like to share or discuss or anything else that you put in your diary entries that you wanted to talk about or mention?

Probably just that I would like to keep using the videos outside of the study and that I also think SVTs will be really helpful for him like before auditions or things like that we've got to warm up quite quietly. I think it was good to have it as a video because it meant I could follow along easily. I felt like the humming really worked for the middle part of my voice that can get quite breathy some days, it really helped it feel clear.

Did you find you used the humming section more often than the rest of the exercises?

Yer sometimes I would just fast forward and do the humming as I think that worked best for my voice.

Thank you. I'll turn off the recording.

Participant 3:

Thank you that's us now recording so firstly thank you taking part in this study. Is there anything you'd like to start off by telling me about your experience?

Thank you. Yes just probably that in all honestly I didn't really do the warm-ups very often I really liked the videos. I thought that they were really clear and would've been easy to follow . but I just ended up not having too much time to do practice. I kept forgetting and I didn't really have any space to myself, so I felt a bit like embarrassed like doing the exercises at home and I couldn't get the video to play for ages cause it wouldn't work on my phone so yeah I didn't do them too much but the times that I did do them I did really like the exercises. I thought the instructions were really clear. They were easy to follow and it was . good to be able to do it along with the piano. I thought that that was really really helpful okay thank you for your honest answer there and I'm glad that you enjoyed the videos on the times that you did them and don't worry at all about not having too much time to engage with them. It's all part of the process. I appreciate any feedback.

So how many times would you say that you managed to do the warm-ups?

Probably about 4 or five times across the weeks and I did the full video each time and sometimes I like some of the exercises I found a bit difficult like I found the voice fricative one with us and I thought that was a little bit hard so I sometimes would skip that one but the rest of them added every time.

Great thank you and did you know anything after the complete in the warmup? Was anything different? Did you notice any changes to your voice?

I definitely felt like my voice was warmed up and then had sort of . find it really helpful to go straight from doing the warmup into doing some of my songs and that I definitely feel like it made my voice feel nice and warm. It made my voice less breathy and fuzzy. Sometimes feel a feeling like a lump in my throat when I'm singing . especially when I'm doing like belt stuff like almost like it feels really tight in my throat and my neck so I feel like that definitely felt better that felt less tight. I am feel like my voice didn't feel as tired sometimes when I'm like singing through stuff at home my voice can get quite tired and I definitely think that that helped it, which was which was good and somedays my voice is just really tired or feels tense so I would do longer on the straw exercises and that would help.

Great thank you and so you mentioned before that you found the fricative exercise. I'm a little bit challenging which of the did you find any other exercises particularly helpful over any of those that were challenging?

I actually really enjoyed the lip trilling. I feel like it and I sometimes feel like my lips get really tense when I'm Singing . so I feel like that really helped me think about keeping that relaxation in my lips and I definitely think that that carried through when I was then singing I definitely noticed that my lips felt really relaxed after that and there was actually there was one time when like halfway through this song I felt my lips going tight so I did a little bit of it on a lip drill and the song and and then it like relax my lips again so I feel like that was really helpful.

Oh great that's that's really good to know and it's great that you've been using some of those techniques during your singing so thank you for that so I see from your original questionnaire and that you said that you do have some confidence in belting which is good to hear. Could you want to expand on that a little bit and let me know whether there's been any changes during this study.

I don't think there was probably any changes to my belting confidence. I've always felt pretty confident with belt and I feel like like it's it's how my voice wants to sound like my voice definitely wants to have that strong sound to it but I definitely would say that my voice felt less strained . and I know I said about you know I get like that feeling in my throat and that tension stuff and I do feel like actually it did help that a little bit but only really maybe be like at the start of the session and then I don't know it felt like maybe the relaxation war off so I don't know if I need to maybe like you know do a little bit more of those exercise exercises to get more used to be in relaxed, but yeah, I don't think it may be changed you know I think I still feel confident built-in but I feel like it definitely did feel more relaxed which was good.

Thank you and obviously we mentioned about understanding SVTs in the questionnaire and I see that you had some previous experience, SRT where did that come from?

From obviously singing lessons and stuff we do at college so I definitely done about SVTs and we did an assignment at college where I like research them and stuff so I definitely know a little bit about

them but I think like for using them probably just more like TikTok stuff which good but yeah, just from that really

Thank you and is there anything else that you wanted to share or discuss or you know? Is there anything that you wrote in your diaries that you wanted to sort of share?

No nothing I can think of but yeah thanks for doing the videos and I'll definitely keep trying them, but yeah, that's that's all.

Great thank you. That's brilliant bye. I'll start recording.

Participant 4:

That's as recording thank you for taking part. There are no right or wrong answers today. I'm just interested in hearing about your experience with the warmup program so is there anything you want to share about your experience to start?

Yeah I actually enjoyed it. Probably more than I thought I would at first I kinda just thought I was just doing another warmup but after a few days I feel like my voice felt quite different.

What do you mean by different?

Just easier to sing I guess it usually takes me awhile before my voice feels ready to sing and warmed up, especially if I've got belt songs but after doing the SVT exercises, I feel like I could get into singing much quicker.

Can you tell me a bit more about what easier felt like?

I don't know it was almost just like I wasn't trying as hard normally feel like a sort of push to get out the belt sound but after I've warmed up I didn't feel like I needed to.

What do you mean? But when you say push

I think I normally like I don't know trying to force out loads of air I guess especially when it's a higher belt and I feel like after I've done the warmup, I could get the same strong sound, but I didn't feel like I was working as hard.

Thank you. How often were you completing the exercise exercises?

Almost every day, which is different for me. Before you sent the videos I just used to warm up and practise once or twice between lessons, but this made me do it more often as I wanted to see if it made a difference.

And did you usually do the whole video or just part of it?

Yeah, most of the time I did just did the whole thing ..

Was it similar to your normal warmup routine?

No, not really normally I just like to do a few scales or like maybe do you like a YouTube video? Yeah I just like gently sing through a couple of songs or yeah just do some skills so this felt different.

Did you use any additional warm-ups after the video?

Yeah sometimes I did do a few scales as well just to like make sure I've been right across my range but yeah, that was always after the video

And did you use the exercises outside of the study at all?

Yeah, I did actually I've been in a show this last weekend and I decided to use the straw phonation exercises before the show . so that like and I did it like before the dress rehearsal and then before the show

And what made you choose to do that?

I felt like I just got into my voice quicker like I just I feel like it helped me warm up so rather than like spending ages doing like some really long warm-ups I just feel like I really quickly got my voice warmed up.

And did you notice any changes after doing that warmup?

Yeah, I definitely felt warmed up and let her feel like I don't know my throat didn't feel as tight.

Can you go into that little more for me?

Well, yeah normally if I'm doing a show and I've got like quite a lot to sing I feel like I don't know like I get like quite tight in my throat doesn't hurt, but it just feels like quite tight like underneath my chin and I definitely feel like it sometimes makes it hard with like my belt and stuff but then I don't know. I feel like doing that doing the warm-ups it just made everything really feel like more relaxed and a bit. I actually hadn't realised how much tension I have in my throat till I did the exercises and starting noticing it wasn't there like normal. So when it was the show I don't know I guess and after the rehearsal my voice felt really tired, so I went back and did the straw warm up before the show and that really helped my voice feel more relaxed and helped me recover.

What do you mean by open?

Just like my voice felt like it comes out easier and like I don't know like I wasn't trying to push out it just it just felt loud like an open I guess.

Oh that's interesting. Thank you. Thank you for sharing that . and did you did your breathing feeling any different at all?

Yeah, I think it did actually I feel like I don't know I wasn't needing to take massive breaths as much.

Can you tell me a bit more about that?

Yeah I just I feel like since I was little I've always felt like if I'm gonna sing a big note I've got like take loads of breath but I don't know. I think I've realised that you don't actually need to have loads of breath. You just have to like control the breath that you already have ..

Thank you. Were there any exercises that stood out during the warm-ups that you've particularly enjoyed?

Definitely the straw. I really enjoyed that one.

What was it about the straw exercise you enjoyed?

I mean I feel like it's easy like at first. I just thought it wasn't like doing anything but then after a few days I feel like I could really tell the difference and like I've seen loads of people do it unlike social

media and I know like all the like musical theatre like stars that I follow stuff I'll do the straw exercises so I felt a bit like them when I was doing them, so yeah, and I think it really made a difference.

What kind of difference do you think it made?

Like I don't know like my voice fell on like switched on. I don't know how else to describe it really

What was singing like after you've done the straw exercise?

I think like my voice was just warmed up like even though I've just been like blowing into the straw my voice felt warmed up and just ready I guessing it and it felt like obviously like really different to belt in like it was just gentle but then when I went from the warm up straight into singing a big song it was like my voice just felt like it was already switched on. I'm ready to go like sometimes just going from singing like a scale and then you're going into like belt like I don't know like your voice isn't really ready for it. Where is this? I don't know. It just felt like it was ready ..

So looking back at initial questionnaire you mentioned and that sometimes you find Belle a bit uncomfortable and you worry about running out of stamina do you think that's changed at all?

Yeah, yeah definitely more comfortable yeah I feel more comfortable with it.

Can you tell me more about that?

I mean I still think it's hard like I think Belton is hard, but it doesn't feel uncomfortable. I think probably because I don't have that didn't have that tension feeling in my throat so it felt like I don't know like I could make the sounds a little bit easier and I could probably get through like when I did the concert the show at the weekend I could like get through it all of my voice didn't feel tired so I felt more confident to go for it and it probably sounded a bit like I don't know a bit brighter I think like it didn't sound like that heavy shouting like I don't know it just even when I was making a strong sound it had a bit of a brighter sound to it which was good.

Grey and did that make you feel more confident?

Yeah, I sort of stopped worrying about like my voice cracking or having a bad day or anything and I could just like enjoy it a bit more and I felt like I was trusting my voice a bit. Let you know anything. I know it's gonna be awful so you worry about it and I think you get intense about it, but yeah, I could just enjoy it just enjoy it.

Before taking part, did you know anything about SVTs at all?

Yeah, little bit of straws and stuff from social media, but I didn't know like lip trails and humming and stuff was like a type of SBT so so that's yeah that's really helpful and I feel like him then much easier to do like it like I only just got a straw for like my birthday a few months ago so I feel like if I'd have known that those other things rest of teas I could've been doing them for a lot longer than then that was brilliant.

So anything changed the way you think about belting?

I think just like the fact that it doesn't have to be tense and like it doesn't mean you have to shout it out as loud as you can I think if you can get your voice really warmed up in and free then you can still make that strong sound without it being shouting.

So looking back at your diary entries is there anything else that you want to share or anything that stood out

Probably just that at the beginning I couldn't tell like if the SOVTs were doing anything, it just seemed like making gentle noises, but then as I've gone on and seen a few days later, I'm starting to say that I think it's helping so it probably just took me a bit of time to get used to doing the exercises and and that kind of thing just cause they were new I guess it makes you feel a bit unsure doesn't it? Especially with destroy it took me like a little bit of experiment to get to get that right and stuff.

Thank you and is there anything else you want to add? I want to discuss today

Probably just that I'm gonna keep doing the exercises. I think it's gonna really help me . make sure that I'm warmed up and not having that structured warmup to do rather than just picking a random YouTube video or like singing some random scales I remember from class. I think having that with the piano in the background and like to like to have that focus each time I think it is really helpful so yeah, I'm gonna keep doing them in the future.

Thank you. I'll turn off the recording now

Participant 5:

Thank you I've pressed record so first of all what she would like to share about this experience to start with

I think the biggest thing for me was learning more about my own voice you know I don't think doing the warm-ups or anything made a big difference to my voice. I didn't get loads better, but I definitely came more aware of what I was doing ..

Can you tell me more about that?

I just think I've never really thought about warming up or what I was doing I just sort of would sing through a song and it felt okay and doing the exercises made me realise that actually I actually probably hold quite a lot tension . in my neck my throat yeah I think it probably I've got quite a lot of tension really and it made me think about it.

Can you expand on that at all? Where do you feel attention?

Yeah probably my neck more I feel quite tense when I'm singing.

How did you become aware of it?

I think doing the exercises made me just take my time and really slow down and instead of like just trying to belt it out and see if I could hit the note that day I was really thinking about harm. My voice felt better before I went into it.

And how often were you doing the warm-ups and you practice?

Probably five days a week because obviously it's a summer holidays so I've got like quite a lot of time so I'm doing it every day.

Is that similar to your usual practice?

No really had only warmup like for a proper lesson or for a show I think normally when I'm just singing at home or prep into a song I just start singing really

Did you do the whole video?

Yeah, most mostly . like sometimes I've just I don't know. I didn't really don't think I've got that much really from the humming and the sirens sometimes I just go straight for the straw stuff and maybe like the light voice for one sometimes I've just go for those.

Why was it those ones that you chose?

I just felt like they probably made the biggest difference ..

Can you expand on what you mean by difference?

My voice just fell settled I guess and maybe like felt a bit easier to control.

What do you mean by the word control?

Suppose just like I knew that the note was gonna come out like I wasn't just guessing and like guessing if the note was gonna happen and I just feel like I could predict that it was gonna happen because my voice felt like warmed up.

Were there any other changes after you to complete the warmup?

No I'd say just that my voice felt more controlled and like switched on.

And did that happen straight away or was that over a few days?

I don't feel like it made much difference in the first few days yeah I just kind of was just doing it because obviously I've said it . but then after about a week, maybe I started feeling that actually my practice felt a little bit easier I was having less like voice cracks and stuff I like wasn't having to work as hard really and I could just do the exercises easy so I could just like enjoy them and stuff like what I do sometimes like I'm trying to do what baking can do from waitress and it's got the big belt note at the end so sometimes like what I do is I try that bit with the straw and do you like straw exercises with that bit and then go in and try that and I feel like that just helps my voice be really relaxed and removes all the tension before I hit the belt because sometimes what I find is by the time I get to that point in this song my voice is feeling tired and it sometimes then goes quite breathy and I can't get that like strong sound out so if I like then have a little bit of a break and do some straw exercises or some sirening and then it made my voice feel like relaxed and then I could go for it again.

Thank you. Thanks for sharing that and were there any of the exercises that you found difficult?

Probably the lip drills I'm not very good at doing those can't really keep the airflow very good so I kept trying to do them but sometimes I just missed them out ..

That's great. Well it's good that you found the ones that worked for you and if I look back at your initial questionnaire, you notice that sometime that you and sometimes like confidence with your belt singing has that changed at all?

I still would say I lack confidence with it. I don't think like my ranges changed or I can't like seeing higher or anything, but I feel like understanding my voice a bit more makes me feel like I can definitely make . more progress like I feel less panicked about it and like if something goes wrong, I think like it's not that I can't do it it's maybe just that like I'm not warmed up and stuff that makes me feel like karma and like I think that it probably sounds a bit more consistent like it's not that some days I can do it in some days I can't do it, but I don't know. Sometimes I have days where I feel like I can be. I feel like I can make a strong sound and hit high notes and then other days I just can't seem to do it ..

Do you think that you're like stamina changes or do you think there's anything else impact in that

Yeah probably I think like if I'm doing a lot of my voice feels tired my voice will tire easy so like if I've got like if I'm singing a lot of things I feel like my voice can get really tired.

And before you did this study did you know much about SVT exercises?

I knew about straw exercises, I've seen them on like YouTube and stuff but yeah I didn't. I didn't know the name of it. I done. I don't like some it. I definitely tried to do literals before and humming and stuff but yeah I didn't know that they were all part of the same thing.

Was there anything else you wanted to share from your diary entries or from the experience as a whole?

When I look back through my diaries, I feel like I just keep writing the words more relaxed so I think probably that spin the biggest change for me is just reducing that tension cause I feel like when I feel tense like that my muscles feel tense it makes me emotionally feel tense like and then. I just think I'm not gonna be able to do belt if I'm having a bad day and then I'm worrying about doing it and then I just lose my confidence so then I'll I'll just stop so I think feeling more relaxed before I started was a really good thing . I'm unsure whether the warm up made a massive difference to the sound I was making every day. Sometimes it definitely sounded better especially if my voice was tired, but other days it still felt hard to belt.

Thank you for sharing, I'll stop the recording.

Participant 6:

Thanks that's us now recording so what would you first like to share about your experience completing this warmup study?

I would say the biggest difference is that it fitted my voice I've done lots of straw exercises before from YouTube and from TikTok and Instagram but I feel like they're always random and some are better than others, just depended which one came up. Lots seem to be aimed at professional singers . and this one just felt like it was made for me and felt really achievable.

Do you want to tell me more about that?

The ones on YouTube were like they start off really low but then they go really high quite quickly and I felt like I was struggling with the range and where is this one was like in a really comfortable range and so I could like actually concentrate on like what exercise I was doing and how it felt rather than trying to hit the notes ..

So would you say you feel like you've done lots of SVT exercises before?

Yeah, mostly lip trills and straw exercises cause obviously I've seen that they're good for my voice and learn about them in college but I didn't really understand why they're good for you. Did any of your understanding change during the program?

Well it did really because I was like doing so many of the exercises I went back over the stuff I've done at college about them and it made me more understand about the exercises and why they work and how they work and how they warm up your voice so it was really interesting to go back over that.

And how often did you complete the exercise exercises?

Almost every day every time I was like rehearsing or singing through anything I would make sure I've done the warmup first sometimes I just go fast forward and do the straw exercises rather than the whole thing, as I found it made my voice feel freer and less tense.

And did you do any additional warm-ups with it?

Yeah, I tend to do like that one first, then I'm going to do some scales and stuff afterwards and then I'll do some like I don't know more Belty warm-ups like spoken residence and like Nenana and stuff just . so like it was to help me get more ready for the for the belt and stuff cause I think the straw gets you warmed up, but then it's like you need to warm up like that belt sound afterwards.

And did you notice anything after complete in the full warmup ??

I would say the biggest difference is that my voice sounded less breathy. I've always struggled with my voice sounding really airy which I don't really like so I think that when I've done the warmup made my voice feel more connected like especially in the morning or like I don't know it just always sounds like really breath so it was good to get it much cleaner and like it was easier to sing.

And did you know it's any other changes?

I think it sounded a bit brighter a bit mixer.

What do you mean by that?

Like it like a bit of a a ring to it like cause it wasn't breathy I could make it sound a little bit mixer a little bit like more like a clean sound like it didn't sound . a shout it sounded just like yeah bit cleaner.

And so did you feel that that affected when you then went into the song, did it help your when you were going through onto your belt repertoire?

Yeah normally when I be I feel like I kind of push a bit especially if I don't feel that warmed up like not like a shout, but definitely like force the sound and then I don't know it just felt much more controlled.

What do you mean by controlled?

I felt like I was in charge of my voice like I was deciding how I wanted it to be.

That's interesting. Thank you for sharing. Do you feel it made any different to any difference to your breaths or your breathing during your singing?

I think I've got into the habit of thinking that I need to take really big breath for belting and then we're doing the lip trails and stuff and like practising like having that column of X I know that's really important for SVTs. I feel like that sort of like calmed my breath down and then I just tried to keep that breath through this breath flow the same this when I was singing and I think that that really Helped my shoulders felt relaxed my neck felt relaxed so yeah I think it definitely helped.

So it seems like you had a lot of success with the straw exercise would you say that that was your favourite exercise and whether any others that surprise you?

I think the voice fricatives I've not done those before and it definitely felt more like like a traditional singing warmup because obviously you're making that singing sound and it made it feel easier when

I was doing like my speech quality stuff like I feel like it connected to that sound well which was which was good.

And looking back at your initial initial questionnaire you mentioned that your belt can sometimes feel inconsistent. Do you want to expand on that?

Yeah I feel like I just have good days and bad days. Sometimes it's more breathy than others. Sometimes I can sing higher than others sometimes my voice gets really tired really soon I just feel like I don't have much like control over how good it is it just depends what the days like and sometimes I'll have her like a show and I'm just having a bad voice day and I feel like I can't hit anything or like I don't have the stamina so I don't know. I'm hoping that if I can keep up with doing my SVTs, maybe that that will help cause it definitely knocks my confidence when I thinking If I can or can't hit the note or if I'm gonna have a voice crack? So it's yeah it's just days are different ..

So looking back at your diary entries is there anything else you want to share or anything that stood out

I would say kept writing the word controlled don't realise I've written it so many times to looked through. I don't really know what I meant by writing it. That's just the word that came to my head. I think it's that feeling of .. I don't know. Just feeling like I knew what my voice was gonna do. I guess.

Is there anything else you'd like to add?

Just that I'm gonna keep up with the exercises and I think it when my voice feels like warmed up and relaxed and I don't have that tension I think then when I go into my exercises into my belt and my voice just feels in a better position to find the placement.

Thank you. I'll stop the recording.

APPENDIX 7:

Coding Document downloaded from Delve

perceived changes in sound quality (0)

speech quality (1)

Participant 1

but I actually think they really helped me feel ready to do more of the speech quality stuff because like it felt like it was warming up my consonant as well.

mix (2)

Participant 6

I think it sounded a bit brighter a bit mixer.

Participant 6

Like it like a bit of a a ring to it like cause it wasn't breathy I could make it sound a little bit mixer a little bit like more like a clean sound like it didn't sound .

strong sound (2)

participant 4

I think if you can get your voice really warmed up in and free then you can still make that strong sound without it being shouting.

participant 4

after I've done the warmup, I could get the same strong sound, but I didn't feel like I was working as hard.

brighter (3)

participant 4

and it probably sounded a bit like I don't know a bit brighter I think like it didn't sound like that heavy shouting like I don't know it just even when I was making a strong sound it had a bit of a brighter sound to it which was good.

Participant 6

I think it sounded a bit brighter a bit mixer.

Participant 6

Like it like a bit of a a ring to it like cause it wasn't breathy I could make it sound a little bit mixer a little bit like more like a clean sound like it didn't sound .

[navigating a changing adolescent voice \(0\)](#)

[vocal issues \(0\)](#)

[breathy sound \(7\)](#)

[Participant 6](#)

I would say the biggest difference is that my voice sounded less breathy.

[Participant 6](#)

like especially in the morning or like I don't know it just always sounds like really breath so it was good to get it much cleaner and like it was easier to sing.

[Participant 6](#)

Like it like a bit of a a ring to it like cause it wasn't breathy I could make it sound a little bit mixer a little bit like more like a clean sound like it didn't sound .

[Participant 6](#)

Sometimes it's more breathy than others.

[Participant 1](#)

I really enjoyed the the siren glides because it felt really gentle and it felt like it was getting my voice really ready to sing, my voice felt much clearer and less breathy afterwards.

[Participant 1](#)

I would always get like a breathy tone and not be able to sing strongly like when it got to like the end of us a song I would like a big bit at the end

[Participant 3](#)

It made my voice less breathy

[voice crack \(4\)](#)

[participant 4](#)

Yeah, I sort of stopped worrying about like my voice cracking or having a bad day or anything and I could just like enjoy it

[Participant 6](#)

it definitely knocks my confidence when I thinking If I can or can't hit the note or if I'm gonna have a voice crack

[Participant 2](#)

It's hard to say because some days I can just belt really well and other days it just feels like I can't do it, like my voice is tired and I can't make the sound and i'll just have a voice crack.

Participant 5

I was having less like voice cracks

vocal tiredness (10)

participant 4

I actually hadn't realised how much tension I have in my throat till I did the exercises and starting noticing it wasn't there like normal. So when it was the show I don't know I guess and after the rehearsal my voice felt really tired, so I went back and did the straw warm up before the show and that really helped my voice feel more relaxed and helped me recover.

Participant 6

metimes my voice gets really tired really soon

Participant 5

Sometimes it definitely sounded better especially if my voice was tired, but other days it still felt hard to belt.

Participant 5

I'm unsure whether the warm up made a massive difference to the sound I was making every day.

Participant 2

It's hard to say because some days I can just belt really well and other days it just feels like I can't do it, like my voice is tired and I can't make the sound and i'll just have a voice crack.

Participant 5

that bit with the straw and do you like straw exercises with that bit and then go in and try that and I feel like that just helps my voice be really relaxed and removes all the tension before I hit the belt because sometimes what I find is by the time I get to that point in this song my voice is feeling tired

Participant 5

Yeah probably I think like if I'm doing a lot of my voice feels tired my voice will tire easy so like if I've got like if I'm singing a lot of things I feel like my voice can get really tired.

Participant 3

I am feel like my voice didn't feel as tired

Participant 3

and somedays my voice is just really tired or feels tense so I would do longer on the straw exercises and that would help.

Participant 3

ometimes when I'm like singing through stuff at home my voice can get quite tired and I definitely think that that helped it, which was which was good and somedays my voice is just really tired or feels tense so I would do longer on the straw exercises and that would help.

vocal strain (1)

Participant 3

I definitely would say that my voice felt less strained

discomfort (2)

Participant 2

normally I get quite a sore throat

Participant 1

I don't know like my voice didn't feel as tired so I could definitely sing for longer night I think it sounded better and I didn't get any like .

daily differences (9)

Participant 6

Yeah I feel like I just have good days and bad days.

Participant 6

Sometimes I can sing higher than others

Participant 6

metimes my voice gets really tired really soon

Participant 6

I just feel like I don't have much like control over how good it is it just depends what the days like

Participant 2

I felt like the humming really worked for the middle part of my voice that can get quite breathy somedays, it really helped it feel clear.

Participant 5

I'm unsure whether the warm up made a massive difference to the sound I was making every day.

Participant 2

It's hard to say because some days I can just belt really well and other days it just feels like I can't do it, like my voice is tired and I can't make the sound and i'll just have a voice crack.

Participant 2

Days are different, somedays I can sing for a long time, other days it feels really hard and I

Participant 5

I feel like I can make a strong sound and hit high notes and then other days I just can't seem to do it ..

developing vocal awareness (0)

learning about my voice (1)

Participant 5

I think the biggest thing for me was learning more about my own voice you know I don't think doing the warm-ups or anything made a big difference to my voice.

slow down (1)

Participant 5

I think doing the exercises made me just take my time and really slow down

awareness (2)

Participant 5

I didn't get loads better, but I definitely came more aware of what I was doing ..

Participant 5

I think the biggest thing for me was learning more about my own voice you know I don't think doing the warm-ups or anything made a big difference to my voice.

belt descriptions (0)

SOVT knowledge (4)

Participant 6

Yeah, mostly lip trills and straw exercises cause obviously I've seen that they're good for my voice and learn about them in college but I didn't really understand why they're good for you. Did any of your understanding change during the program?

Participant 6

Well it did really because I was like doing so many of the exercises I went back over the stuff I've done at college about them and it made me more understand about the exercises and why they work and how they work and how they warm up your voice so it was really interesting to go back over that.

Participant 5

I definitely tried to do literals before and humming and stuff but yeah I didn't know that they were all part of the same thing.

Participant 3

so I definitely done about SVTs and we did an assignment at college where I like research them and stuff so I definitely know a little bit about them

specific SOVTs (3)

participant 4

Definitely the straw. I really enjoyed that one.

Participant 2

so yeah I just I just know it from that really and obviously things that we've done at college and where it's mentioned as well.

Participant 1

I didn't get a sore throat when I was singing and I think it's because I'd warmed up really well before I sang thank you.

straws (15)

participant 4

Definitely the straw. I really enjoyed that one.

participant 4

I think like my voice was just warmed up like even though I've just been like blowing into the straw my voice felt warmed up

participant 4

I actually hadn't realised how much tension I have in my throat till I did the exercises and starting noticing it wasn't there like normal. So when it was the show I don't know I guess and after the rehearsal my voice felt really tired, so I went back and did the straw warm up before the show and that really helped my voice feel more relaxed and helped me recover.

Participant 6

Yeah, mostly lip trills and straw exercises cause obviously I've seen that they're good for my voice and learn about them in college but I didn't really understand why they're good for you. Did any of your understanding change during the program?

Participant 6

sometimes I just go fast forward and do the straw exercises rather than the whole thing, as I found it made my voice feel freer and less tense.

Participant 6

think the straw gets you warmed up, but then it's like you need to warm up like that belt sound afterwards.

Participant 2

At first I didn't like doing the straw exercises but then once I could feel them helping my voice and making it less tense that was my favourite exercise, it seemed to really work for my voice so I did it every day.

Participant 1

watch videos and reels of like people using SOVTs and do straws to make their voice stronger

Participant 1

rather than if you can't afford to get a straw, so which I don't have some that was really good.

Participant 5

that bit with the straw and do you like straw exercises with that bit and then go in and try that and I feel like that just helps my voice be really relaxed and removes all the tension before I hit the belt because sometimes what I find is by the time I get to that point in this song my voice is feeling tired

Participant 5

sirening and then it made my voice feel like relaxed and then I

Participant 5

I knew about straw exercises, I've seen them on like YouTube and stuff but yeah I didn't.

Participant 3

and somedays my voice is just really tired or feels tense so I would do longer on the straw exercises and that would help.

Participant 5

I just felt like they probably made the biggest difference ..

Participant 5

just go straight for the straw stuff

humming (2)

participant 4

but I didn't know like lip trails and humming

Participant 2

I felt like the humming really worked for the middle part of my voice that can get quite breathy somedays, it really helped it feel clear.

lip trills (5)

participant 4

but I didn't know like lip trails and humming

Participant 6

Yeah, mostly lip trills and straw exercises cause obviously I've seen that they're good for my voice and learn about them in college but I didn't really understand why they're good for you. Did any of your understanding change during the program?

Participant 6

and then we're doing the lip trails and stuff and like practising like having that column of X I know that's really important for SVTs.

Participant 5

Probably the lip drills I'm not very good at doing those can't really keep the airflow very good so I kept trying to do them but sometimes I just missed them out ..

Participant 3

I actually really enjoyed the lip trilling.

voiced fricatives (5)

Participant 6

I think the voice fricatives I've not done those before and it definitely felt more like like a traditional singing warmup because obviously you're making that singing sound and it made it feel easier when I was doing like my speech quality stuff like I feel like it connected to that sound well which was which was good.

Participant 5

I'm unsure whether the warm up made a massive difference to the sound I was making every day. Sometimes it definitely sounded better especially if my voice was tired, but other days it still felt hard to belt.

Participant 1

I really enjoyed the the siren glides because it felt really gentle and it felt like it was getting my voice really ready to sing, my voice felt much clearer and less breathy afterwards.

Participant 1

I found the voice fricatives hard because that was new and I've not experienced those before so that was a little bit challenging .

Participant 3

like I found the voice fricative one with us and I thought that was a little bit hard so I sometimes would skip that one but the rest of them added every time.

Social Media (6)

participant 4

've seen loads of people do it unlike social media

participant 4

Yeah, little bit of straws and stuff from social media

Participant 6

I would say the biggest difference is that it fitted my voice I've done lots of straw exercises before from YouTube and from TikTok and Instagram but I feel like they're always random and some are better than others, just depended which one came up. Lots seem to be aimed at professional singers .

Participant 2

Really just from YouTube and yeah TikTok loads of people talk about how important SVTs are

Participant 1

I watch videos and reels of like people using SOVTs and do straws to make their voice stronger and to make them sound better, but I haven't done much of them myself before other than copying stuff off TikTok but I don't know if I was doing it correctly so it was good to do the videos and then I could work along with it and have you got any more knowledge of SVTs since this experience?

Participant 3

ut I think like for using them probably just more like TikTok stuff which good but yeah, just from that really

creating a warm up strategy for adolescent engagement (0)

Acceptability of the intervention (0)

suitable for voice (3)

Participant 6

I would say the biggest difference is that it fitted my voice I've done lots of straw exercises before from YouTube and from TikTok and Instagram but I feel like they're always random and some are better than others, just depended which one came up. Lots seem to be aimed at professional singers .

Participant 6

this one just felt like it was made for me and felt really achievable.

Participant 6

The ones on YouTube were like they start off really low but then they go really high quite quickly and I felt like I was struggling with the range and where is this one was like in a really comfortable range and so I could like actually concentrate on like what exercise I was doing and how it felt rather than trying to hit the notes ..

engagement length (3)

Participant 6

sometimes I just go fast forward and do the straw exercises rather than the whole thing, as i found it made my voice feel freer and less tense.

participant 4

most of the time I did just did the whole thing ..

Participant 5

Yeah, most mostly . like sometimes I've just I don't know. I didn't really don't think I've got that much really from the humming and the sirens sometimes I just go straight for the straw stuff and maybe like the light voice for one sometimes I've just go for those.

[structured warm up \(1\)](#)

[participant 4](#)

I remember from class. I think having that with the piano in the background and like to like to have that focus each time I think it is really helpful so yeah, I'm gonna keep doing them i

[with piano \(3\)](#)

[participant 4](#)

I remember from class. I think having that with the piano in the background and like to like to have that focus each time I think it is really helpful so yeah, I'm gonna keep doing them i

[Participant 3](#)

and it was . good to be able to do it along with the piano. I thought that that was really really helpful

[Participant 3](#)

I thought the instructions were really clear. They were easy to follow

[helpful \(2\)](#)

[Participant 2](#)

I think it was good to have it as a video because it meant I could follow along easily.

[Participant 2](#)

Just that I found the videos really helpful.

[enjoyed \(6\)](#)

[Participant 2](#)

I really enjoyed doing it.

[participant 4](#)

Yeah I actually enjoyed it.

[Participant 3](#)

he times that I did do them I did really like the exercises

[Participant 3](#)

I really liked the videos. I thought that they were really clear and would've been easy to follow

[Participant 1](#)

and I liked the videos because I usually just use random YouTube videos or like videos on like TikTok with like people doing warmup so this was good as it felt more suitable for my voice in my range cause sometimes the warm-ups go too high or too low.

Participant 1

Yeah I really enjoyed doing the videos.

clear videos (4)

Participant 2

I think it was good to have it as a video because it meant I could follow along easily.

Participant 3

I thought the instructions were really clear. They were easy to follow

Participant 3

I really liked the videos. I thought that they were really clear and would've been easy to follow

Participant 2

It was really good because they were really clear and just sure and just really targeted and they were like a really good range for my voice, so it was easy for me to follow along ..

length of video (3)

participant 4

rather than like spending ages doing like some really long warm-ups

Participant 2

completed the full video every time

Participant 2

because it was just nice and short so it meant that I could just do that warmup and know that you know I've done enough to warm up my voice

timing (1)

Participant 1

I did like the full video each time sometimes I would like go over and do like other exercises in it twice to make my warmup a bit longer if like if it was in the morning or something and it was taking me awhile to get going .

[regularity \(11\)](#)

[Participant 6](#)

Almost every day every time I was like rehearsing or singing through anything I would make sure I've done the warmup first

[participant 4](#)

Before you sent the videos I just used to warm up and practise once or twice between lessons, but this made me do it more often as I wanted to see if it made a difference.

[Participant 2](#)

At first only about like I did it in once in the first week and then I then started to do it every couple of days cause I had to practice for doing a performance and then I feel like it really helped so this last week I've been doing it every day and then doing a little bit of practice every day and I feel like that's been really helpful.

[Participant 2](#)

completed the full video every time

[Participant 5](#)

Probably five days a week because obviously it's a summer holidays so I've got like quite a lot of time so I'm doing it every day.

[participant 4](#)

How often were you completing the exercise exercises?

Almost every day

[Participant 3](#)

Probably about 4 or five times across the weeks and I did the full video each time

[Participant 3](#)

didn't do them too much

[Participant 3](#)

I didn't really do the warm-ups very often

[Participant 1](#)

Yes I did the videos at the start of each practice.

Participant 1

It encouraged me to practice more often and I normally only practice a couple of times a week so having that as a focus helped me make sure I was practising which was good

previous warm ups (2)

Participant 6

Yeah, I tend to do like that one first, then I'm going to do some scales and stuff afterwards and then I'll do some like I don't know more Belty warm-ups like spoken residence and like Nenana and stuff just .

Participant 5

No really had only warmup like for a proper lesson or for a show I think normally when I'm just singing at home or prep into a song I just start singing really

usual warm up (2)

Participant 6

Yeah, I tend to do like that one first, then I'm going to do some scales and stuff afterwards and then I'll do some like I don't know more Belty warm-ups like spoken residence and like Nenana and stuff just .

participant 4

No, not really normally I just like to do a few scales or like maybe do you like a YouTube video? Yeah I just like gently sing through a couple of songs or yeah just do some skills so this felt different.

additional warm up (3)

Participant 6

Yeah, I tend to do like that one first, then I'm going to do some scales and stuff afterwards and then I'll do some like I don't know more Belty warm-ups like spoken residence and like Nenana and stuff just .

Participant 6

think the straw gets you warmed up, but then it's like you need to warm up like that belt sound afterwards.

participant 4

Yeah sometimes I did do a few scales as well just to like make sure I've been right across my range but yeah, that was always after the video

youtube (3)

participant 4

having that structured warmup to do rather than just picking a random YouTube video

Participant 6

The ones on YouTube were like they start off really low but then they go really high quite quickly and I felt like I was struggling with the range and where is this one was like in a really comfortable range and so I could like actually concentrate on like what exercise I was doing and how it felt rather than trying to hit the notes ..

Participant 5

I knew about straw exercises, I've seen them on like YouTube and stuff but yeah I didn't.

scales (2)

participant 4

or like singing some random scales

Participant 6

Yeah, I tend to do like that one first, then I'm going to do some scales and stuff afterwards and then I'll do some like I don't know more Belty warm-ups like spoken residence and like Nenana and stuff just .

transferability (0)

repeated warm up outside of study (1)

participant 4

Yeah, I did actually I've been in a show this last weekend and I decided to use the straw phonation exercises before the show

transition into singing a song (7)

participant 4

obviously like really different to belt in like it was just gentle but then when I went from the warm up straight into singing a big song it was like my voice just felt like it was already switched on.

Participant 6

Just that I'm gonna keep up with the exercises and I think it when my voice feels like warmed up and relaxed and I don't have that tension I think then when I go into my exercises into my belt and my voice just feels in a better position to find the placement

Participant 5

that bit with the straw and do you like straw exercises with that bit and then go in and try that and I feel like that just helps my voice be really relaxed and removes all the tension before I hit

the belt because sometimes what I find is by the time I get to that point in this song my voice is feeling tired

Participant 3

keeping that relaxation in my lips and I definitely think that that carried through when I was then singing

Participant 3

I definitely noticed that my lips felt really relaxed after that and there was actually there was one time when like halfway through this song I felt my lips going tight so I did a little bit of it on a lip drill and the song and then it like relax my lips again so I feel like that was really helpful.

participant 4

after doing the SVT exercises, I feel like I could get into singing much quicker.

Participant 3

find it really helpful to go straight from doing the warmup into doing some of my songs

Physiological impact (0)

emotion (1)

Participant 5

educing that tension cause I feel like when I feel tense like that my muscles feel tense it makes me emotionally

vocal trust (1)

participant 4

I could just like enjoy it a bit more and I felt like I was trusting my voice a bit.

initial scepticism (2)

participant 4

Probably just that at the beginning I couldn't tell like if the SOVTs were doing anything,

Participant 5

I don't feel like it made much difference in the first few days yeah I just kind of was just doing it because obviously I've said it .

confidence (8)

participant 4

Yeah, I sort of stopped worrying about like my voice cracking or having a bad day or anything and I could just like enjoy it

participant 4

I felt more confident to go for it

Participant 6

it definitely knocks my confidence when I thinking If I can or can't hit the note or if I'm gonna have a voice crack

Participant 2

I feel more confident with belt

Participant 5

and then I just lose my confidence

Participant 1

but I actually think they really helped me feel ready to do more of the speech quality stuff because like it felt like it was warming up my consonant as well.

Participant 5

still would say I lack confidence with it

Participant 3

I don't think there was probably any changes to my belting confidence.

unsure (5)

Participant 5

I'm unsure whether the warm up made a massive difference to the sound I was making every day.

Participant 2

I always find quite hard because people might hear me so just took me a little while to get used to practising

Participant 2

was a bit unsure about doing them at first . because I felt like I didn't really know what I was doing, it just seemed to be some random blowing into a straw and I didn't want anyone to hear me making crazy sounds but once I got into using them

Participant 2

I didn't want anyone to hear me making crazy sounds

Participant 2

I've used some YouTube videos before that have been okay for doing scales but nothing that had any SVTs so this felt really helpful, but I was a bit unsure about doing them at first .

Perceived changes (0)

vocal readiness (0)

into my voice quicker (1)

participant 4

felt like I just got into my voice quicker

voice felt different (1)

participant 4

but after a few days I feel like my voice felt quite different.

connected voice (1)

Participant 6

when I've done the warmup made my voice feel more connected

switched on (3)

participant 4

obviously like really different to belt in like it was just gentle but then when I went from the warm up straight into singing a big song it was like my voice just felt like it was already switched on.

participant 4

Like I don't know like my voice fell on like switched on.

Participant 5

No I'd say just that my voice felt more controlled and like switched on.

voice felt open (1)

participant 4

Just like my voice felt like it comes out easier and like I don't know like I wasn't trying to push out it just it just felt loud like an open I guess.

voice felt free (4)

participant 4

I think if you can get your voice really warmed up in and free then you can still make that strong sound without it being shouting.

participant 4

Just like my voice felt like it comes out easier and like I don't know like I wasn't trying to push out it just it just felt loud like an open I guess.

Participant 2

was just like yeah it was easier to sing

Participant 2

I would definitely feel that my voice feels Free

Voice felt warm (15)

participant 4

I just feel like I really quickly got my voice warmed up.

participant 4

I think if you can get your voice really warmed up in and free then you can still make that strong sound without it being shouting.

participant 4

I think like my voice was just warmed up like even though I've just been like blowing into the straw my voice felt warmed up

Participant 6

Yeah normally when I be I feel like I kind of push a bit especially if I don't feel that warmed up like not like a shout, but definitely like force the sound and then I don't know it just felt much more controlled.

Participant 2

after I've got into doing the warm-ups my voice felt really warm

Participant 2

t just it made it feel really warm

Participant 1

I really enjoyed the the siren glides because it felt really gentle and it felt like it was getting my voice really ready to sing, my voice felt much clearer and less breathy afterwards.

Participant 1

and my voice would feel tired by that point so by doing this like this warmup my voice felt really warmed

Participant 5

Suppose just like I knew that the note was gonna come out like I wasn't just guessing and like guessing if the note was gonna happen and I just feel like I could predict that it was gonna happen because my voice felt like warmed up.

participant 4

I don't know it was almost just like I wasn't trying as hard normally feel like a sort of push to get out the belt sound but after I've warmed up I didn't feel like I needed to.

Participant 3

hat I definitely feel like it made my voice feel nice and warm

Participant 3

definitely felt like my voice was warmed up

Participant 1

I would say it felt warm energised flexible and fast moving.

Participant 1

I started singing my voice felt like really warm

Participant 1

I definitely feel like my voice felt ready to sing.

reduced vocal effort (0)

not trying as hard (2)

Participant 5

I like wasn't having to work as hard really

participant 4

I don't know it was almost just like I wasn't trying as hard normally feel like a sort of push to get out the belt sound but after I've warmed up I didn't feel like I needed to.

shouting (3)

participant 4

I think if you can get your voice really warmed up in and free then you can still make that strong sound without it being shouting.

participant 4

nd like it doesn't mean you have to shout it out as loud as you can

Participant 6

ike it didn't sound . a shout

force out air (2)

Participant 6

Yeah normally when I be I feel like I kind of push a bit especially if I don't feel that warmed up like not like a shout, but definitely like force the sound and then I don't know it just felt much more controlled.

participant 4

I think I normally like I don't know trying to force out loads of air

push (4)

participant 4

wasn't trying to push out it

Participant 6

Yeah normally when I be I feel like I kind of push a bit especially if I don't feel that warmed up like not like a shout, but definitely like force the sound and then I don't know it just felt much more controlled.

participant 4

I think I normally like I don't know trying to force out loads of air

participant 4

I don't know it was almost just like I wasn't trying as hard normally feel like a sort of push to get out the belt sound but after I've warmed up I didn't feel like I needed to.

[easier to sing \(4\)](#)

[participant 4](#)

didn't feel like I was working as hard.

[participant 4](#)

I don't know it was almost just like I wasn't trying as hard normally feel like a sort of push to get out the belt sound but after I've warmed up I didn't feel like I needed to.

[participant 4](#)

after doing the SVT exercises, I feel like I could get into singing much quicker.

[participant 4](#)

Just easier to sing I guess

[belt feels easier \(2\)](#)

[Participant 2](#)

was just like yeah it was easier to sing

[Participant 2](#)

I definitely feel like my belt feels easier.

[relaxed \(9\)](#)

[participant 4](#)

I feel like doing that doing the warm-ups it just made everything really feel like more relaxed and a bit.

[Participant 2](#)

I would definitely feel that my voice feels Free, it felt easier to sing

[Participant 2](#)

I think that my voice definitely felt relaxed after the the humming and the siren

[Participant 1](#)

kind of felt relaxed.

[Participant 5](#)

that bit with the straw and do you like straw exercises with that bit and then go in and try that and I feel like that just helps my voice be really relaxed and removes all the tension before I hit

the belt because sometimes what I find is by the time I get to that point in this song my voice is feeling tired

Participant 5

sirening and then it made my voice feel like relaxed and then I

Participant 5

When I look back through my diaries, I feel like I just keep writing the words more relaxed so I think probably that spin the biggest change for me

Participant 3

so I feel like that definitely felt better that felt less tight

Participant 3

I get like that feeling in my throat and that tension stuff and I do feel like actually it did help that a little bit but only really maybe be like at the start of the session and then I don't know it felt like maybe the relaxation war off so I don't know if I need to maybe like you know do a little bit more of those exercise exercises to get more used to be in relaxed,

comfortable (3)

participant 4

Yeah, yeah definitely more comfortable

participant 4

I actually hadn't realised how much tension I have in my throat till I did the exercises and starting noticing it wasn't there like normal. So when it was the show I don't know I guess and after the rehearsal my voice felt really tired, so I went back and did the straw warm up before the show and that really helped my voice feel more relaxed and helped me recover.

participant 4

I mean I still think it's hard like I think Belton is hard, but it doesn't feel uncomfortable.

range (7)

Participant 6

The ones on YouTube were like they start off really low but then they go really high quite quickly and I felt like I was struggling with the range and where is this one was like in a really comfortable range and so I could like actually concentrate on like what exercise I was doing and how it felt rather than trying to hit the notes ..

Participant 6

Sometimes I can sing higher than others

Participant 2

I think the high notes were so much better like I just feel like I could sing high

Participant 1

after I've done the warm-ups I feel like I could be much higher

Participant 1

I usually get a lot of tension in my voice especially when belting, but this made it feel relaxed and made me feel like I could hit the belt easier and manage to go higher.

Participant 5

don't think like my ranges changed or I can't like seeing higher or anything, but I feel like understanding my voice a bit more makes me feel like I can definitely make

Participant 1

and I liked the videos because I usually just use random YouTube videos or like videos on like TikTok with like people doing warmup so this was good as it felt more suitable for my voice in my range cause sometimes the warm-ups go too high or too low.

Physical effect of SOVT warm up (0)

energised voice (1)

Participant 1

I felt like my voice had more energy.

breath (7)

participant 4

Yeah I just I feel like since I was little I've always felt like if I'm gonna sing a big note I've got like take loads of breath but I don't know. I think I've realised that you don't actually need to have loads of breath. You just have to like control the breath that you already have ..

participant 4

eah, I think it did actually I feel like I don't know I wasn't needing to take massive breaths as much

Participant 6

think I've got into the habit of thinking that I need to take really big breath for belting

Participant 6

and then we're doing the lip trails and stuff and like practising like having that column of X I know that's really important for SVTs.

Participant 6

I feel like that sort of like calmed my breath down and then I just tried to keep that breath through this breath flow the same this when I was singing and I think that that really Helped my shoulders felt relaxed my neck felt relaxed so yeah I think it definitely helped.

Participant 2

I don't know it felt I don't kind of felt like I could breathe easier so yeah that was really good.

Participant 5

Probably the lip drills I'm not very good at doing those can't really keep the airflow very good so I kept trying to do them but sometimes I just missed them out ..

tension (6)

participant 4

I think just like the fact that it doesn't have to be tense

Participant 2

At first I didn't like doing the straw exercises but then once I could feel them helping my voice and making it less tense that was my favourite exercise, it seemed to really work for my voice so I did it every day.

Participant 1

I usually get a lot of tension in my voice especially when belting, but this made it feel relaxed and made me feel like I could hit the belt easier and manage to go higher.

Participant 5

and removes all the tension before I hit the belt

Participant 5

educing that tension cause I feel like when I feel tense like that my muscles feel tense it makes me emotionally

Participant 5

I actually probably hold quite a lot tension

throat tension (7)

participant 4

know my throat didn't feel as tight

participant 4

I get like quite tight in my throat doesn't hurt, but it just feels like quite tight

participant 4

I think probably because I don't have that didn't have that tension feeling in my throat

Participant 3

and fuzzy. Sometimes feel a feeling like a lump in my throat when I'm singing

Participant 3

really tight in my throat and my neck

Participant 3

I get like that feeling in my throat and that tension stuff and I do feel like actually it did help that a little bit but only really maybe be like at the start of the session and then I don't know it felt like maybe the relaxation war off so I don't know if I need to maybe like you know do a little bit more of those exercise exercises to get more used to be in relaxed,

Participant 5

in my neck my throat yeah I think it probably I've got quite a lot of tension really and it made me think about it.

neck tension (6)

participant 4

I get like quite tight in my throat doesn't hurt, but it just feels like quite tight

Participant 6

I feel like that sort of like calmed my breath down and then I just tried to keep that breath through this breath flow the same this when I was singing and I think that that really Helped my shoulders felt relaxed my neck felt relaxed so yeah I think it definitely helped.

Participant 2

ike all my neck can feel quite tense

Participant 3

really tight in my throat and my neck

Participant 5

Yeah probably my neck mature I feel quite tense when I'm singing.

Participant 5

in my neck my throat yeah I think it probably I've got quite a lot of tension really and it made me think about it.

lip tension (2)

Participant 3

I feel like it and I sometimes feel like my lips get really tense when I'm Singing .

Participant 3

I definitely noticed that my lips felt really relaxed after that and there was actually there was one time when like halfway through this song I felt my lips going tight so I did a little bit of it on a lip drill and the song and and then it like relax my lips again so I feel like that was really helpful.

register changes (1)

Participant 2

and I felt like I could do more changes between registers a bit easier like I could flipping and out a little bit easier

Increased Stamina (7)

participant 4

I could probably get through like when I did the concert the show at the weekend I could like get through it all of my voice didn't feel tired

Participant 6

I feel like I can't hit anything or like I don't have the stamina so I don't know

Participant 2

normally I would probably feel quite tired after doing a singing practice but I definitely feel like I could go for longer

Participant 1

I don't know like my voice didn't feel as tired so I could definitely sing for longer night I think it sounded better and I didn't get any like .

Participant 1

and my voice would feel tired by that point so by doing this like this warmup my voice felt really warmed

Participant 3

and somedays my voice is just really tired or feels tense so I would do longer on the straw exercises and that would help.

Participant 1

s good. I felt like my voice had more energy.

vocal control (8)

Participant 6

Yeah normally when I be I feel like I kind of push a bit especially if I don't feel that warmed up like not like a shout, but definitely like force the sound and then I don't know it just felt much more controlled.

Participant 6

I just feel like I don't have much like control over how good it is it just depends what the days like

Participant 6

I would say kept writing the word controlled don't realise I've written it so many times to looked through.

Participant 6

I felt like I was in charge of my voice like I was deciding how I wanted it to be.

Participant 2

I felt like had a bit more control which was good.

Participant 5

No I'd say just that my voice felt more controlled and like switched on.

Participant 5

Suppose just like I knew that the note was gonna come out like I wasn't just guessing and like guessing if the note was gonna happen and I just feel like I could predict that it was gonna happen because my voice felt like warmed up.

Participant 5

My voice just fell settled I guess and maybe like felt a bit easier to control.

[barriers to implementation \(0\)](#)

[difficulty \(2\)](#)

[Participant 3](#)

like I found the voice fricative one with us and I thought that was a little bit hard so I sometimes would skip that one but the rest of them added every time.

[Participant 3](#)

sometimes I like some of the exercises I found a bit difficult

[forgetting \(1\)](#)

[Participant 3](#)

I kept forgetting

[lack of rehearsal space \(1\)](#)

[Participant 3](#)

didn't really have any space to myself,

[embarrassed \(1\)](#)

[Participant 3](#)

I felt a bit like embarrassed like doing the exercises at home

[technology issues \(1\)](#)

[Participant 3](#)

I couldn't get the video to play for ages cause it wouldn't work on my phone

[lack of time \(1\)](#)

[Participant 3](#)

ended up not having too much time to do practice.

[crazy sounds \(1\)](#)

[Participant 2](#)

I didn't want anyone to hear me making crazy sounds.