Module 6
BMPF7010D

Working and Learning: An Introduction to Work-Based Higher Education

Project title

Voices from the Studio: Experienced singing teachers discuss the ways in which they *conceptualise and enact* the translation of vocal science into studio teaching, and the role of strategic imagery frameworks in that process.

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Word Count
Proposal 1402
Total Report 13,282
Total Word Count 14,684

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The Proposal

Voices from the Studio: Experienced singing teachers discuss the ways in which they *conceptualise and enact* the translation of vocal science into studio teaching, and the role of strategic imagery frameworks in that process.

The Context

Singing is an inherently covert activity, with many physiological processes occurring out of sight and often beyond conscious awareness (Brown, 2022; Madill, 2025; Moss Erickson, 2025). These characteristics highlight the necessity for creating pedagogical strategies that convert abstract concepts into actionable information, which, in my experience as a singing teacher, is essential for improvement. This qualitative research proposes a series of semi-structured interviews with fellow singing teachers to document verbatim use of imagery in training, along with the stated pedagogical purpose, the intended physiological outcomes, and student experiential feedback. Scrutinising the data through the lens of existing voice science and clinical research may identify where these line-up or differ, and perhaps reveal new pathways for integrating objective and subjective approaches in singing pedagogy. The discussion of the physiological outcomes through imagery interventions is likely to be key to the value of the paper to singing teachers.

This project is a natural progression from my previous academic work exploring imagery use in elite sport settings. Importantly, the choice of subject for this research is closely aligned with the framework that underpins my own teaching practice: Evidence-Based Voice Pedagogy (EBVP) (Ragan, 2018, 2022). The EBVP framework combines subjective, artistic, and imagery-based language with the objective, quantifiable language of voice science, positing that ‘evidence’ is broader than just scientific data and includes teacher experience, artistic intuition and student feedback. This refreshing re-framing of the notion of evidence in singing pedagogy is a motivating factor for this paper; any physiological outcome whether successful or not, would be considered ‘evidence’.

The justification

Despite extensive research in both voice science and imagery-based pedagogy, there remains limited systematic documentation of verbatim examples of how singing teachers are using imagery in their studios (Janjigian, 2024; Ruffino et al., 2021). Access to these experiences could provide a lifeline for inexperienced teachers. I am motivated by my own experiences that demonstrate that imagery-use facilitates the development of proprioceptive self-monitoring, which enables students to cultivate reliable internal feedback for technical accuracy and artistic expression. In essence, imagery is essential in bridging Ryle’s (1949) stated distinction between “Knowing That” scientific

knowledge and “Knowing How” the embodied practice (Ryle, 1949). However, along with the linguistic challenges of condensing abstract concepts using, for example, metaphorical language, teachers must also navigate the delicate division between the ‘right’ and the ‘wrong’ language, which can have a detrimental effect on learning (Brown, 2021; Moss-Erickson, 2025). Therefore, the creation of a formalised collection of anecdotal experiences, both positive and not, that are drawn from the wider teaching community, scrutinised through a scientific lens, could provide the foundations of an evidence-based protocol in singing pedagogy that is lacking in the current literature.

Intended Impact

By reflecting on and integrating new strategies, this research aims to enhance my professional practice while fostering a culture of shared learning among singing teachers. Documenting diverse teaching approaches may support both new and experienced teachers in broadening our pedagogical toolkit, beyond the limited perspective of masterclasses, which, by their nature, represent a single viewpoint. Ultimately, as teachers develop more effective strategies informed by both peer dialogue and student feedback, these findings may improve student outcomes. In line with Kolb’s (1984, 2015) experiential learning model, this research promotes a cyclical process of reflection and growth, benefiting both teachers and students within the voice pedagogy community.

Outlined intention (methods and methodology)

This qualitative research will employ a pragmatic approach, focussing on practical solutions with real-world applicability that could be useful to the wider vocal pedagogy community. The study design will follow the Five Stage Research Process Model (Stuart et al., 2002) and will be framed by Wiltsher’s Lens Theory of Imagination (2019, 2022), which conceptualises imagination as a dynamic mental process involving the active manipulation and transformation of mental content, rather than replication or simulation inherent in the master / apprentice relationship norms.

Stage 1: Literature Review

The initial stage will involve a literature review to inform the design of the research tools and contextualise the study. This review will include:

- Examples of similar research that uses questionnaires to investigate imagery use by performers (De Santis et al., 2022; Munroe et al., 2000; Nordin et al., 2005)
- Existing frameworks that bridge artistic and scientific approaches, such as Evidence-Based Voice Pedagogy (Ragan, 2018, 2022)
- Analysis of how traditional metaphors and imagery in singing could align with findings from voice science.
- A review of qualitative research methodologies, particularly phenomenology and thematic analysis protocols, such as Braun and Clarke’s (2020) six-phases of thematic analysis.

- Consideration of teacher-researcher bias in self-reported data.

Stage 2: Participant Recruitment

Participants will be recruited from conservatoires, drama schools, and professional associations (e.g., British Voice Association, IOTOS, Musicians' Union). The aim is to gather a diverse sample of singing teachers with experience in using imagery.

Stage 3: Data Collection

Data will be collected in two phases:

1. Online Questionnaire: An online questionnaire will be designed to elicit detailed information from singing teachers about their use of imagery interventions, the pedagogical purposes, intended physiological outcomes, and student feedback.
2. Follow-up Interviews: A subset of participants who indicate willingness will be selected for follow-up interviews to gain deeper insights into their practices and experiences.

Stage 4: Data Analysis

Thematic analysis will be conducted following Braun and Clarke's (2020) six-phase protocol. Data from questionnaires and interviews will be coded to identify recurring themes and patterns in the use of imagery and its perceived effectiveness. The analysis will also consider how these practices align with or diverge from established voice science and pedagogical frameworks.

Expected Learning Outcomes

- Enhanced Pedagogical Practice: As a self-employed singing teacher working in solo practice, I expect to significantly broaden my understanding of diverse teaching approaches through exposure to colleagues' methods and strategies, directly enriching my own pedagogical toolkit.
- Professional Network Development: I anticipate building meaningful connections with fellow singing teachers and researchers, expanding my professional network and raising my profile within the vocal pedagogy community.
- Research Design Skills: Having never designed a questionnaire before, I expect to develop competency in survey construction, including question formulation, response design, and consideration of bias and validity issues.
- Qualitative Research Methods: I will gain practical experience in thematic analysis and coding techniques, developing skills in systematic data analysis that will be valuable for future research endeavours.
- Academic Writing and Communication: Given my passion for language and words, I expect to refine my ability to communicate complex pedagogical concepts clearly and effectively, both in academic writing and in translating research findings for practical application.

- Knowledge Creation and Dissemination: I anticipate developing skills in creating research outputs that contribute meaningfully to the voice pedagogy community, enhancing my professional standing as both a practitioner and researcher.
- Critical Reflection Skills: Through the research process, I expect to develop stronger abilities in critical self-reflection and evidence-based evaluation of my own teaching practices.

Ethical Considerations

This study will address key ethical issues, including confidentiality, informed consent, and the potential for teacher-researcher bias, particularly in the interpretation of self-reported data. All questionnaire responses will remain anonymous to ensure participants' privacy and encourage honest, uninhibited feedback. Additionally, no student will be identified by name or any other personally identifying information in the research. Teachers will be asked to discuss their own experiences of using imagery in the studio, but not to share any information that could reveal the identity of their students. As the research does not involve direct contact with or data collection from students themselves, student consent is not required; however, teachers will be reminded to respect their students' privacy at all times.

Any Interviews will be conducted online, with audio capture only. Each interviewee will be assigned a coded number to protect their identity while allowing for cross-referencing of data. All audio recordings will be securely stored and will be deleted once the research has been marked and approved by the University of Wales Trinity Saint David (UWTSD). Any research materials generated through participant involvement will be destroyed following the completion of the project.

The collaborative nature of working with an institution such as UWTSD will provide ongoing feedback and scrutiny by experienced tutors throughout the planning, execution, and analysis phases of the project (Costley et al., 2010), ensuring a robust framework for ethical accountability and good research practice.

The Study: Voices from the Studio

Voices from the Studio: Experienced singing teachers discuss the ways in which they *conceptualise and enact* the translation of vocal science into studio teaching, and the role of strategic imagery frameworks in that process.

Introduction

This research argues that the use of *imagery* in singing pedagogy represents a fundamentally human, creative, responsive form of expertise that cannot be replicated by Artificial Intelligence or be determined by algorithms and is worth preserving and cataloguing. While journals publish increasingly sophisticated studies on physiology, acoustic analysis, and motor learning principles, there remains limited documentation of how experienced singing teachers translate these concepts or develop their own empirically-tested approaches. That is not to say that there are not some excellent publications from figures of authority in voice pedagogy (Bozeman, 2025; Chapman, 2016, 2021; Helding, 2020, LeBorgne et al., 2026; Moss-Erickson, 2025; Obert, 2023; Titze, 2012), more that there may be a wealth of valuable anecdotal experience that could be drawn from the wider teaching community to supplement existing literature. The author, who is a singing teacher, seeks to honour, illuminate and learn from the lived experiences of these teachers. The studio is not merely a site where established techniques are applied, but a generative space where innovation emerges from the dynamic interaction between teacher expertise, student needs, and the extreme complexities of the singing voice. The study employs a humanistic, phenomenological methodology to capture these experiences (Merleau-Ponty, 1945; Moustakas, 1994); this choice of approach is deliberate and rooted in the conviction that certain forms of knowledge, particularly the tacit, embodied, experiential knowledge of expert practitioners, cannot be adequately captured through experimental or quantitative methods alone (Polanyi, 1966). The ultimate aim is to begin to address the current gap in applied voice pedagogy literature by privileging the grassroots practitioner voice as a legitimate, ‘human’ and irreplaceable source of knowledge.

In order to understand the author’s more specific aim in exploring teachers’ use of *imagistic* strategies, it is important to highlight that singing, unlike dance for example, where body alignment stands paramount and is outwardly observable, singing is a mostly covert activity which presents a unique set of teaching challenges that can be served well through the use of imagery. The vocal process is also complex, involving neurological, psychological and physiological phenomena, along with artistic and emotional demands (Helding, 2020). When considering these complexities, it is perhaps understandable that learning to sing can not be a linear, or necessarily, a logical process (Obert, 2023). Within the stated demands of the process, the role of imagination becomes a necessarily pragmatic tool in developing *somatic awareness* to effect specific physiological outcomes (Brown, 2021, 2023). When considering the outlined complexities, there is perhaps an implied imperative that teachers should possess base scientific knowledge to be effective. Professor Johan Sundberg, the highly regarded author of *The Science of the Singing Voice* (1987),

recently stated in a podcast, that "in the absence of theoretical knowledge, misconceptions and superstition rage" (Sundberg, 2025). Essentially, Sundberg suggests that singing teachers must remain theoretically well-informed in order to manage the challenges present in the multi-sensory nature of voice production. To that end, teachers can now benefit from a wide breadth of robust published voice pedagogy and scientific texts. However, Helding cautions that “a teacher's knowledge has little value to the learner if the teacher cannot find a way into the learner's mind” (Helding 2020, p. 98). This again, raises the critical question: how do expert teachers actually translate this scientific knowledge into practical, accessible learning experiences for diverse students in real studio contexts? *Imagery* has historically served this translational role, from 16th-century luminaries such as Maffei (1562), Caccini (1614), Lamperti (1890) and Garcia II (1841), through to more contemporary pedagogues such as Chapman (2006, 2021), Daşdöğen et al., (2025), LeBorgne et al. (2026), Miller (1996), Monany (2022) and Moss-Erickson (2025). What is interesting to the author of this paper, is to consider, ‘how’ teachers are currently using imagery in their studios, beyond the published literature.

In his influential book *The Concept of Mind,* Ryle (1949), introduces the now-popular distinction between “Knowing That” (propositional knowledge) and “Knowing How” (procedural knowledge) that is in itself based on a premise posited by ancient Greek philosophers. Within the framework of this research, imagery is explored as a bridge between these positions of theoretical knowledge (“Knowing That”) and practical execution in singing training (“Knowing How”). It is interesting to note that Ryle argues against the idea that all practical knowledge can be reduced to propositional knowledge (Ryle, 1949). This may provide a degree of comfort to those singing teachers, including the author, whose practices are underpinned by a pragmatic philosophy that aligns with the colloquial principle of ‘if it works, it works’, aligning with *Evidence-Based Voice Pedagogy* (EBVP). EBVP posits that 'evidence' includes teacher experience, artistic intuition and student feedback, alongside scientific data (Ragan, 2018, 2022). Pragmatism evaluates ideas and techniques by their practical consequences for a specific singer and that ‘truth' in singing pedagogy is what reliably improves function and artistry (Dewey, 1916, 1929). It is important to acknowledge that the very personal nature of an imagery experience bars any teacher from truly accessing, or dictating to, the minds of their students (Pearson, 2019); the teacher’s role is both as a conduit of knowledge and a facilitator of meaningful experiences. In that respect, co-constructivism reframes the teacher-student relationship as a creative partnership rather than a transmissive process (Robinson, 2010). Knowledge is co-created through dialogue and experimentation, suggesting a re-evaluation of the 'master/apprentice' model towards a more dialogic pedagogy (Robinson et al., 2010; Vygotsky, 1978).

Given the central role of imagination in the transmission of knowledge in voice pedagogy, Wiltsher’s *Lens Theory* (2019, 2022) has been adopted as a theoretical framework for this research; this theory positions imagination as a dynamic, procedural mechanism that focuses, refines, magnifies, and filters experience to effect transformative operations. Through the lens of this theory, the imagery strategies documented in this study are understood not as fixed techniques

to be replicated, but as dynamic, context-dependent tools that expert teachers adapt, refine, and filter based on real-time observation of student response.

By examining the verbatim accounts of elite practitioners, this study illuminates how teachers may, or may not, select and adapt imagery strategies for individual learners. This practitioner knowledge may help the wider community of teachers navigate imagery appropriateness, recognising that a one-size-fits-all approach is untenable, given the personal nature of imagination (Brown, 2022; Helding 2020; Madill, 2025; Moss-Erickson, 2025; Pearson, 2019). Experienced singing teachers possess vast knowledge repositories, accumulated through thousands of teaching hours and deep attention to individual voices. The goal is to make this tacit knowledge explicit and available to the broader pedagogical community, without reducing its complexity. The research draws upon in-depth interviews with very experienced singing teachers, purposively selected to represent diversity in pedagogical lineage, genre specialisation (classical, musical theatre, contemporary commercial music), geographical location, and institutional context. Participants were identified through criteria including professional reputation, institutional affiliation and demonstrated pedagogical impact.

Literature review

Vocal Science: A Historic Overview

While advancements in acoustics research, neuroscience and cognitive science, provide modern pedagogues with a more profound understanding of voice production, it should be noted that voice teaching literature demonstrates little doubt of the ongoing influence of the enlightened work of historic vocal pedagogues on contemporary Western singing teaching such as those mentioned earlier in this paper; Maffei (1562), Caccini (1614), Lamperti (1890) and Garcia II (1841). Contemporary voice pedagogy, across all genres, emerges from centuries of accumulated training wisdom and methodological evolution. The evolution of acoustic science may owe some degree of debt to the pioneering work of Berton Coffin (1960, 1976), a prominent American pedagogue, classical singer and author, whose work revolutionised the understanding of vowel modification, resonance and registration in singing. Additionally, Herbert-Caesari's *The Voice of the Mind* (1951) draws from classical pedagogy, exploring kinaesthetic spatial mapping of vowels, hypothesising that pitch discrimination results in perpetual migration of 'felt' sound. The illustrations in his book depict /i/ vowels as possessing the 'felt' characteristics of tall and thin, relative to its more 'squat' cousin, /ɑ/; a perceptual imagery strategy that is still in use in voice training and is applicable to all genres. This foundation maintains value for training approaches that honour traditional principles while addressing the diverse performance demands of 21st-century singers (Brown, 2023; LeBorgne et al., 2024; Lillis, 2020). The foundational principles of what became codified as *Bel Canto* singing have their roots in 16th century Renaissance Italy, a period of scientific and artistic enlightenment (Toft, 2024). Significantly, the Renaissance fascination with anatomical study fostered unprecedented interdisciplinary collaboration between artistic and scientific domains

(including Leonardo da Vinci (1452-1519) who achieved mastery in multiple scientific and artistic fields); while anatomists produced illustrated educational texts, artists simultaneously contributed to these publications and pursued anatomical knowledge to enhance their own creative practice and comprehension (Domenico, 2012). These scientific advances directly influenced the development of a more systematic approach to vocal pedagogy that would become grounded in vocal physiology; singers would be able to *conceptualise* and learn to regulate internal functions. In other words, singers could use forms of imagery to map out and coordinate underlying processes. Maffei's treatise (1562) posited that effective vocal instruction required a combination of physiological understanding along with *immaginativa,* a concept rooted in Aristotle's foundational treatise, *De Anima* (350 BCE, trans., Lawson-Tancred, 1987), which describes imagination as the faculty that allows perceptions to persist and form the basis of action (Honea, 2018). Given that singing is both a physical and multi-sensory activity, imagination is not simply metaphorical but physiologically active. Essentially, Maffei (1562) proposes that by focusing on the imagined action, the singer can bypass the conscious interference, often referred to as *cognitive overload*, that direct muscular effort can create, positioning *immaginativa* as procedural, thereby aligning with Lens Theory (Wilsher, 2019, 2022). Gestalt theory, developed in the early 20th century, builds on these early hypotheses positing that the mind organises individual sensory inputs into 'wholes' rather than separate parts; Margaret Floy Washburn's (1916) *Movement and Mental Imagery,* a significant influence on the development of motor theory, proposes that the mind can undertake complex physical tasks more efficiently by 'overall' neural processing (Kofka, 1922; Kohler, 1929; Wagemans et al, 2012; Washburn, 1916). The evolution of neuroscience, cognitive science and contemporary research methods and equipment, gives extraordinary credence to some of these early insights.

Contemporary Voice Science

For clarity 'voice science' may be defined as the interdisciplinary study of the physiological, acoustic, neurological, and psychological processes involved in voice production, perception, and pedagogy (LeBorgne et al., 2025; The Voice foundation, 2025; Sundberg, 1989; Zhang, 2016). Contemporary pedagogues now benefit from a wealth of clinical, academic and empirical research, that can often be verified by advanced technology. For example, imaging methods such as MRI, laryngoscopy and nasal endoscopy allow for detailed observation of vocal fold function, while acoustic tools such as spectrography yield visual representations of harmonic frequencies in real time (Obert, 2023). Such representations, increasingly accessible in teaching settings, enable students to align auditory and kinaesthetic feedback with measurable acoustic output (Howell, 2025; Bozeman 2025; Obert, 2023). Similarly, formant analysis has illuminated how vocal tract adjustments shape resonance and tonal colour, offering pedagogues precise ways to contextualise traditional terms of 'placement' or feelings of 'space' (Bozeman, 2017; Howell, 2016).

Alongside biomechanics and acoustics, *neuroscience* and *cognitive science* has expanded the scope of vocal science. Studies employing fMRI, TMS, electromyography and other neuroimaging

methods demonstrate that subvocalisation (internalised vocalisation) activates neural pathways and muscular innervation in ways similar to overt action (Debarnot, 2014; Jeannerod, 1995; Monany et al., 2022; Moss-Erickson, 2025). This supports the pedagogical value of *mental practice* where singers imagine words or melodies to strengthen motor planning. Such findings mirror developments in elite sport, where combining mental rehearsal with physical training has been shown to accelerate skill acquisition and retention (Guillot et al., 2008; Jeannerod, 1995). These present clear parallels with voice pedagogy; numerous studies demonstrate that motor skill acquisition involves processing perceptual information rather than mechanistic repetition (Brown, 2023; Verdolini Abbott, 2000).

The Gap: From Knowledge to Practice

By engaging with educational theories, such as those supported by Dewey (1916) and Robinson (2010), who reject models of rote or passive acquisition in favour of *co-constructivism*, singing teachers might harness this ever-evolving body of voice science to enhance learning outcomes. Bruner's concept of *scaffolding* demonstrates how initial structured support from the teacher gradually empowers the learner to internalise strategies and operate independently (Bruner, 1996). To aid this process of internalisation teachers will need to cultivate imagination in their students (Le Borgne et al., 2025; Obert, 2023; Sundberg, 2025). An emergent pedagogical framework moves from scientific insight to practical application through imagery as a translational tool. In such a framework, imagery-based voice teaching equips singers with the broader meta-skill of learning to learn, which is an adaptive, transferable capacity to reframe, reinterpret and refine their artistry, inherent in Lens Theory (Wiltsher, 2019, 2022).

From "Knowing That" to "Knowing How" (Ryle, 1949): Stages of Learning and imagery's role

Cognitive science reveals the process of repetition as essential to durable learning; Ebbinghaus's *Forgetting Curve* (1885) demonstrates that without reinforcement, memory decays rapidly, but that *spaced repetition* significantly improves long-term retention (Cepeda et al., 2006; Dewar, 2012; Ebbinghaus, 1885; Kwik, 2025; Moss-Ercikson, 2025). In the context of voice, Verdolini-Abbott's principles of motor learning situate singing as a form of *implicit memory,* or "knowing how" without conscious recall (Verdolini Abbott, 2000). This implicit learning depends on focused attention, sensory awareness, and repeated practice, processes particularly aligned with the pedagogical use of imagery, which embeds learning through multi-sensory *priming cues* across sight, sound, touch, and proprioception. Embodied awareness, what Verdolini Abbott calls the "being here now" of learning, facilitates neuroplasticity, ensuring technical and interpretive habits become robust over time (Gippert et al., 2025; LeBorgne et al., 2024; Verdolini Abbott, 2000). Feedback from the teacher remains essential, both to direct attention and to prevent the cognitive overload that can occur when too many concurrent imagery strategies dilute sensory focus (Verdolini Abbott, 2020). This synthesis of neuroscience and educational theory provides a robust foundation for voice

pedagogy that places imagery, embodiment and structured practice at the centre of artistic growth, adding value to the nature of this research.

From “Knowing That” to “Knowing How”: Imagery as the Translational Tool

Imagery experiences are inherently subjective and no two singers will form the same mental construct in an identical way, a challenge noted by Bruner (1996), Pearson (2019) and Wiltsher (2019, 2022). This raises difficulties for transcription and replication, as one singer’s effective image may be meaningless, or even detrimental, to another; Pearson (2019), suggests that the use of imagery with people suffering from certain psychotic disorders, can be clinically disruptive. The pedagogical value of imagery therefore lies less in the image itself than in its physiological outcomes, which *can* often be measured. For example, a singer exploring chiaroscuro balance (perceived tonal brightness or darkness) may be advised to “imagine the dome of a cathedral at the back of your throat”, evoking pharyngeal expansion and resonance in the pyriform sinuses, thereby boosting low frequencies, which can be confirmed aurally or through spectrographic analysis. Embodied alternatives, such as a system of singers’ hand gestures codified in the Estill Model (1988), signalling vocal tract modifications to elicit changes in voice qualities, such as ‘twangy’ or ‘hooty’, link imaginative intent with specific motor tasks, while acoustic software provides an in-vivo visual representation of the harmonic outcomes. Interestingly, the use of codified hand gestures while singing was popularised in the 18th and 19th centuries to assist singers in learning to read music scores. This was later refined by Zoltán Kodály in the early 20th century into an eponymous system, still widely used in music education, that allows singers to internalise pitch relationships through spatial-kinaesthetic mapping. This historical precedent demonstrates that multimodal, embodied approaches to vocal learning are not modern innovations but rather refinements of long-standing pedagogical wisdom. Great contemporary singers such as Cynthia Erivo, Mariah Carey and Christina Aguillera can be seen to be using hand gestures and body movements while undertaking potentially difficult tasks. Modern day pedagogues need to be able to teach the required physiology of an ever-evolving range of styles; for example, Billie Eilish’s distinctive breathy tone can be framed simultaneously as a physiological configuration of the vocal folds and as an imaginative target, perhaps “ultra-breathy”, “intimate” or “whispery” co-created by singer and teacher. Pavarotti described achieving a natural pianissimo by “pretending to have lost [his] voice,” an image that immediately elicited the required coordinations (Hines, 1982, 2006). Hines, who interviewed Pavarotti, and is himself a classical singer, describes imagining pushing a beach ball down under the water on ascending pitches to help add core stability to the production of high notes. Essentially, imagery can manifest in a multitude of ways through the umbrella terms: linguistic imagery (metaphoric language for example), visual imagery, auditory imagery, spacial and kinaesthetic imagery (movement).

In his best selling book *Limitless* (2020, 2025), Jim Kwik argues that learning does not occur through single channels of modality but through the integration of visual, auditory, and kinaesthetic systems (VAK), which is supported by others (Helding, 2020, 2021). Additionally, a groundbreaking

joint Harvard and Google study found that the long-popular division of “right-brain creativity” versus “left-brain logic” or *functional specialisation* has no scientific foundation (Rogers, 2013). For voice pedagogy, this multimodal approach underscores why imagery-based instruction can be such a powerful bridge from “Knowing That' to “Knowing How’.

Conclusion

In summary, the integration of voice science with pedagogy offers teachers more than descriptive knowledge; it enables the translation of scientific observation into practical, imagistic frameworks that support motor learning, meta-learning and embodied awareness. Where traditional methods relied primarily on metaphor or imitation, the contemporary teacher can merge those traditions with evidence-based insights, ensuring that imagery is not a substitute for science but rather a vital conduit through which complex processes are internalised and made artistically expressive.The findings that follow illuminate not only what imagery strategies elite teachers employ, but more importantly, how and why they make these pedagogical choices in response to individual student needs.

Methodology

Philosophical Positioning

Phenomenology, as both philosophy and method, directs attention to how individuals make meaning of their experiences (Merleau-Ponty, 1945; Moustakas, 1994). In the context of this research, this means exploring not just what imagery teachers are using, but how they understand, justify, and adapt their practices in response to the unique demands of each teaching moment. This shift from prescription to description, from universal principles to situated practice, opens space for a richer, more nuanced understanding of pedagogical expertise.

Teachers encounter problems, experiment with solutions, refine approaches based on student outcomes, and develop frameworks that work, often long before, or entirely independent of, academic validation. This experiential knowledge-building aligns closely with Evidence-Based Voice Pedagogy (EBVP), which recognises that practitioner experience constitutes legitimate evidence alongside scientific research (Ragan, 2018, 2022). Polanyi's concept of *tacit* knowledge (1966) is also relevant here: the idea that we can know more than we can tell, that expert practice involves embodied, intuitive understanding not fully captured by explicit rules or conscious awareness.

My aim is to make this tacit knowledge more explicit and more available to the broader pedagogical community, without reducing its complexity or claiming to have found a singular correct approach. Wiltsher's Lens Theory (2019, 2022), adopted as the theoretical framework for this study, honours the active, generative nature of imagination in the voice studio, a framework that allows teachers and students to co-create meaning through iterative experimentation. These philosophical considerations have directly informed the research design.

Research Design

Interviews

An initial two-part online imagery questionnaire proved unsuccessful in recruiting participants. Through peer and tutor feedback, I recognised that the nature of describing imagery is nuanced, context-driven, and challenging to articulate succinctly in an impersonal online form. Imagery strategies are deeply embedded in the relational dynamics of the teaching studio; they emerge, adapt, and find meaning in dialogue. Therefore, I made the decision to undertake the research through semi-structured interviews only. A ‘by-invitation’ approach yielded the unexpected advantage of being able to select deeply credible participants, while also developing my professional network.

Interviews were conducted via Zoom, each lasting approximately 30 minutes. This format was chosen to accommodate the geographical diversity of participants, spanning the United Kingdom, and the United States, while allowing the flexibility for participants to share their experiences in depth. The relatively brief duration reflected participants' professional schedules while proving sufficient to capture rich, focused data on imagery practices.

The semi-structured format was designed to address key themes while allowing space for unexpected insights to emerge. Core questions explored participants' pedagogical backgrounds, their understanding and use of imagery, specific strategies they employ, how they adapt imagery for different learners, and their views on the relationship between imagery and voice science. Prior to each interview, I undertook preliminary research to identify each participant's specialisms and pedagogical context, enabling more targeted and resonant questioning.

All interviews were audio recorded with participant consent and transcribed using AI transcription tools (DeepAgent and Google Gemini). Transcripts were subsequently reviewed for accuracy against the original recordings and lightly edited for clarity where necessary.

Participant Selection

Thirteen elite singing teachers were recruited through purposive sampling (Patton, 2002), selected to represent diversity across pedagogical lineage, genre specialisation, geographical location, and institutional context. Selection criteria included:

1. Demonstrated pedagogical impact through institutional leadership, conference presentation, professional recognition through citations, on-line engagement/presence
2. Active engagement with contemporary discourse on voice pedagogy
3. Willingness to discuss imagery practices in depth

Sample size was guided by the constraints imposed by University of Wales Trinity Saint David's deadlines, and by the principle of data saturation (Guest et al., 2006). Thirteen interviews proved sufficient to achieve thematic saturation while maintaining analytical manageability for a Masters-level study.

Each participant was contacted personally via email with a study overview (Appendix) and consent form (Appendix D). Most participants gave permission for their names to be used in the final dissertation, enabling appropriate attribution of their pedagogical contributions. I was aware that the study required the sharing of intellectual property (IP), and, as such, sought participant permission to make an attribution where there were clear elements of originality and where it would be professionally enhancing to the participant, such as proprietary pedagogical frameworks. Of equal importance is the dispelling of any sense that the views expressed in the interviews are

necessarily shared or endorsed by the wider community of participants; this will be reiterated in the discussion and analysis.

Data Analysis

Interview transcripts were analysed using thematic analysis informed by Braun and Clarke's (2022) six-phase framework, adapted for phenomenological inquiry. Analysis was conducted using Delve qualitative coding software, which facilitated systematic organisation and retrieval of coded data across the thirteen transcripts. The analytical process involved two complementary approaches:

Thematic Coding

A hybrid coding strategy was employed, combining deductive codes derived from the literature (for example: imagery modality, motor learning principles, EBVP alignment) with inductive codes emerging from the data itself (such as, practitioner-developed frameworks, psychological safety strategies, co-constructive practices, embodied practice).

Major themes were identified through pattern recognition across practitioners, attending to both convergent practices and meaningful variations. I was particularly attentive to instances where practitioners diverged from expected patterns or challenged my assumptions, treating these as analytically significant rather than anomalous.

Imagery Reference Matrix

Alongside thematic coding, specific imagery strategies were catalogued in a structured matrix documenting: the practitioner, verbatim imagery description (wherever possible), intended physiological outcome, pedagogical domain, imagery type, sensory modality, and theoretical or scientific basis. This matrix serves both analytical and practical functions, enabling systematic pattern identification across the dataset while providing a reference tool for practitioners seeking concrete examples of imagery in use.

Ethical Considerations

Ethical Approval and Data Management

Ethical approval for this study was obtained from University of Wales Trinity Saint David. All participants provided written informed consent prior to interview (Appendix E), having received detailed information about the study's aims, procedures, and their right to withdraw at any time without consequence. Audio recordings and transcripts are stored securely in accordance with

GDPR requirements and institutional data management policies, accessible only to myself and my supervisor.

The Singing Teacher as Researcher

Qualitative research demands reflexivity, an explicit acknowledgment of how the researcher's identity, background, and assumptions shape the research process (Finlay, 2002). As a singer and singing teacher with over ten years' experience working primarily in Contemporary Commercial Music (CCM) and Musical Theatre (MT) genres, I approached this study as both researcher and practitioner. This dual positioning offers both advantages and challenges that must be named:

Advantages of Insider Status

My experiential understanding of the voice studio facilitated richer interviews through shared professional language and an intuitive grasp of the practical challenges teachers face. This allowed engagement in substantive dialogue about pedagogical choices without requiring participants to explain basic concepts. Participants could speak to me as a colleague, enabling conversations to move more quickly to nuanced insights. As an experienced practitioner, I could recognise when a teacher was describing something significant even if they had not named it explicitly, and I was able to ask informed follow-up questions that probed deeper into practice.

Challenges and Mitigation Strategies

This insider status also risks projecting assumptions onto participants' words, seeing what I expected rather than what was actually present in the data. To mitigate this, I engaged in several reflexive practices:

- Verbatim prioritisation: Where possible, the Imagery Reference Matrix privileges direct quotations over paraphrased summaries, reducing interpretive imposition and preserving participants' own language.
- Peer debriefing: Regular discussions with my dissertation supervisor provided external perspective on emerging interpretations and challenged potential blind spots.
- Negative case attention: I was guarded against instances that contradicted my expectations or challenged my own pedagogical assumptions, treating these as analytically significant and interesting.

This positioning also shaped my analytical framework. Rather than evaluating participants' imagery strategies against external criteria of correctness, I approached each interview seeking to understand the internal logic of their practice, how their imagery choices made sense within their pedagogical philosophy, genre context, and accumulated experience.

Trustworthiness

Qualitative research is sometimes critiqued as subjective or lacking rigour; to mitigate this, I have adhered to Lincoln and Guba's (1985) proposed alternative criteria for evaluating qualitative work: credibility, transferability, dependability, and confirmability.

- Credibility was enhanced through prolonged engagement with the data, triangulation across multiple practitioners
- Transferability is supported through thick description of participants' contexts, detailed documentation of imagery strategies in the matrix, enabling readers to assess applicability to their own settings
- Dependability was addressed through systematic documentation of analytical decisions, maintenance of an audit trail, and consistent application of the coding framework across all transcripts
- Confirmability was supported through reflexive practices documented above, verbatim quotation in findings, and the separation of descriptive cataloguing (the matrix) from interpretive analysis (thematic findings and discussion)

Results

From 18-invitations issued, only three remained unanswered with two agreeing to be interviewed but logistically unable to attend and 13-individuals ultimately being interviewed, reflecting strong professional interest in the research topic.

PARTICIPANT DEMOGRAPHICS

Teaching Experience
All participants demonstrated substantial professional experience (minimum 9 years, with the majority having 20+ years), establishing them as experienced practitioners
Academic vs. Non-Academic Routes
The sample includes both academically-trained teachers (conservatoire degrees, Master's programs) and those who followed apprenticeship or non-traditional routes
Cross-Disciplinary Expertise
Several participants bring expertise from adjacent fields: • Speech-Language Pathology (2) • Acoustic Science (2) • Theatre Practice (1) • Somatic Practices (4) • Cognitive Sciences (2)
Geographic Distribution
Predominantly UK and USA-based reflecting the English-language nature of the study and researcher's networks
Genre Diversity
The sample represents breadth across classical, musical theatre, jazz, and most forms of contemporary commercial music, ensuring findings reflect diverse pedagogical contexts
Teaching Contexts
Mix of conservatoire, private practice, online and rehabilitation contexts ensures the findings are not limited to a single institutional setting
Gender Distribution
Female n=7 Male n=6
Professional Standing
Participants include published authors, certification program directors, heads of vocal departments, those cited in academic research or achieving significant traction with the public. All those interviewed earned high level professional achievement and recognition

IMAGERY MATRIX

The *Imagery Matrix* presents an illustrative sample of imagery strategies extracted from the interview data. The full matrix of 71 strategies is provided in Appendix B. This sample has been selected to demonstrate the diversity of modalities employed by nine of the elite practitioners interviewed, ranging from purely kinaesthetic sensations to multimodal approaches combining auditory, visual, and proprioceptive elements.

MODALITY DEFINITIONS

Modality	Definition
Visual	Images involving sight, spatial relationships, colours, shapes. Processed primarily through visual cognitive pathways.
Auditory	Images involving sounds, tones, qualities of sound. Engaged through auditory processing and audiation.
Kinaesthetic	Images involving body sensation, movement, physical feeling. Engages proprioceptive and somatic awareness.
Kinaesthetic/Proprioceptive	Combines body sensation with internal awareness of body position and movement in space.
Visual/Kinaesthetic	Multimodal imagery combining visual representation with physical/ embodied experience.
Auditory/Kinaesthetic	Multimodal imagery combining auditory input with physical sensation and body awareness.
Multimodal	Combines three or more modalities (visual, auditory, kinaesthetic) simultaneously.

IMAGERY DEFINITIONS

Imagery Type	Definition
Linguistic Metaphor	Figurative language using comparison to communicate sensation or action (e.g., "whimpering puppy").
Acoustic Metaphor	Metaphors specifically relating to sound qualities or tonal characteris tics.
Audiation	Mental hearing of music; internal representation of sound without ext ernal stimulus (Gordon, 1999).
Auditory Modelling	Using recorded or live exemplars to establish target sound through li stening.
Auditory Imagery	Mental representation of sounds, including timbral qualities and musi cal patterns.
Spatial Mapping	Assigning spatial/ directional properties to abstract concepts like pitch, resonance, or p hrase direction.
Gestural	Hand or body gestures used as prompts or representations of vocal concepts.
Movement-Based	Whole- body movement or kinetic activity to embody or facilitate vocal produ ction.
Visual Biofeedback	Technology- assisted visual representation of acoustic phenomena (e.g., spectro grams).
Visual Metaphor	Imagery using visual concepts to represent non-visual phenomena.
Visual/Imitation	Observational learning through watching and replicating demonstrat ed behaviours.

ABBREVIATIONS	
EBVP	Evidence-Based Voice Pedagogy - An approach recognising that "what works" in practice constitutes valid evidence

Table (1): Illustrative Sample of Imagery Strategies from the Imagery Reference Matrix. Note: full matrix (71 entries) Appendix A

1. Imagery Strategy	“Whimpering puppy”
Intended Outcome	Modulation of airflow and subglottic pressure and pressure / volume decrease or soft palate awareness
Pedagogical Domain	Breath Management / Nasality
Imagery Type	Linguistic Metaphor
Sensory Modality	Kinaesthetic
Theoretical/Scientific Basis	Can reduce subglottic pressure and tension. Promotes sense of elevation of soft palate
2. Imagery Strategy	“Add more size” in chest voice
Intended Outcome	Increases ‘depth’ of sound
Pedagogical Domain	Vocal Tone
Imagery Type	Linguistic / Acoustic Metaphor
Sensory Modality	Kinaesthetic
Theoretical/Scientific Basis	Can produce changes in sub-glottic pressure contributing to loudness or ‘thickness of sound. Equally, the words ‘more size’ can contribute to widening the pharynx to boost lower frequencies
3. Imagery Strategy	Low notes can be thought of as a puppet on a string. Controlled from above and light.
Intended Outcome	Prevents singer ‘grave-digging” and putting pressure on the larynx to achieve low notes
Pedagogical Domain	Vocal Tone
Imagery Type	Linguistic Metaphor
Sensory Modality	Kinaesthetic
Theoretical/Scientific Basis	Exerting pressure by pushing on the larynx can lead to vocal cracks and discomfort
4. Imagery Strategy	Visualisation of the movement of the diaphragm; The singer puts hands and elbows together in front of their body, as they breath in, the elbows come out and the hands to mid-line, thus mimicking rib and diaphragmatic movement.
Intended Outcome	Allows singer to associate movement with cycle of breathing and avoiding high clavicular breathing
Pedagogical Domain	Breath Control
Imagery Type	Movement-Based
Sensory Modality	Kinaesthetic

Theoretical/Scientific Basis	Creates immediate proprioceptive feedback using accessible body parts (arms) to model less accessible areas (ribs). The geometric relationship (downward movement causing lateral expansion parallels the actual physiological action. Provides a self-assessment tool students can use independently. Wider expansion of ribcage may be more efficient in singing, in opposition to high shallow, clavicular breathing
5. Imagery Strategy	Ascribing colours to tonal qualities: “it sounds silvery or it sounds metallic”
Intended Outcome	Facilitates modification of tonal quality
Pedagogical Domain	Vocal Tone
Imagery Type	Linguistic Metaphor
Sensory Modality	Visual/Kinaesthetic
Theoretical/Scientific Basis	Vocal tract resonance modification that can be assessed both acoustically and evidenced on spectrogram as harmonic modifications resulting from laryngeal manipulation
6. Imagery Strategy	“ A rapper generally talks about flow as the rhythm and where it's going”
Intended Outcome	Evoking a sense of movement, direction and energy throughout the phrase
Pedagogical Domain	Phrasing
Imagery Type	Spatial Mapping
Sensory Modality	Visual/Kinaesthetic
Theoretical/Scientific Basis	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
7. Imagery Strategy	Creating written cues aligning with melodic contour and intervals: Horizontal lines representing pitch movement as a notation system. Arrows for pitch bending or scooping and squiggly lines for multiple notes
Intended Outcome	Visual cues for learning melodic patterns
Pedagogical Domain	May provide faster processing for some learners, as visual contour directly maps to melodic shape.
Imagery Type	Spatial Mapping
Sensory Modality	Visual / Kinaesthetic
Theoretical/Scientific Basis	Aligns with cognitive science: leverages spatial working memory and visual pattern recognition rather than requiring symbolic decoding (such as traditional musical notation)
8. Imagery Strategy	*The colour wheel of sound spectrum*. My client “felt the chest voice or the deeper darker sounds that we make in the lower register as burgundy shaped or burgundy coloured, so, using her language, I asked her how can we make it more burgundy? How can we make it darker? How can we add a little silver to that burgundy? For some clients twang is yellowy, brighter, shinier tones.” Gocke Kutsal (2025)
Intended Outcome	Using colour palate to develop changes in vocal tone representative of mood, genre etc.
Pedagogical Domain	Vocal Tone / Timbral Modification

Imagery Type	Visual / Kinaesthetic
Sensory Modality	Visual
Theoretical/Scientific Basis	Vocal tract resonance modifications
9. Imagery Strategy	“Roots coming from your feet going through into the ground” (physical grounding)
Intended Outcome	A sense of physical grounding, that seeks to remove tension from the throat and more stabilisation in the sound
Pedagogical Domain	Breath Support / stability
Imagery Type	Linguistic Metaphor
Sensory Modality	Kinaesthetic/Proprioceptive
Theoretical/Scientific Basis	Control of subglottic pressure
10. Imagery Strategy	Imagining squeezing a tube of toothpaste. This metaphor is particularly effective because it provides: 1. Directional information (bottom-up vs. middle-out) 2. Relate to a familiar Kinaesthetic experience 3. Implicit sequencing (squeeze travels upward) 4. Prevention of counter-productive patterns (clavicular breathing, mid-torso gripping) (Henny, 2025)
Intended Outcome	Breath support. Allows the sensation of direction through association with a familiar Kinaesthetic experience (squeezing toothpaste)
Pedagogical Domain	Breath Support
Imagery Type	Linguistic Metaphor
Sensory Modality	Kinaesthetic/Proprioceptive
Theoretical/Scientific Basis	Stabilisation contributes to balanced pressure and flow through appropriate subglottic pressure. The metaphor may suggest no gripping

MAJOR CROSS-CASE THEMES IDENTIFIED

Universal Themes

- 12 participants include imagery and metaphor use as central & primary pedagogical tools
- Universal commitment to student-centered teaching (adapting to individual needs)
- Shared focus on physical/kinaesthetic awareness in vocal training
- Common use of spatial concepts in teaching (particularly resonance)
- Unanimous emphasis on experience-based learning through experimentation

Most Common Imagery Terms

1. "image" (635 mentions across all participants)
2. "up" (379 mentions - universal spatial imagery)
3. "back" (220 mentions - directional imagery)
4. "feel" (143 mentions - kinaesthetic language)

Physical/Kinaesthetic Approach

- All participants emphasise physical sensations and body awareness
- Strong focus on "feeling" rather than just "thinking"
- Common use of kinaesthetic language: "feel" (143 mentions), "sense" (58 mentions)

Resonance and Space

Total: 506 mentions | 13/13 participants

- Universal use of spatial and resonance imagery in teaching
- Most common spatial terms: "up" (165), "back" (128), "high" (74), "down" (69), "forward" (36)
- Consistent focus on vocal placement and resonance concepts

Sound and Tone Quality

Total: 345 mentions | 13/13 participants

- All participants discuss and work with tone quality descriptors
- Common sensory descriptors used across participants
- Focus on helping students develop their tonal palette

Descriptors Used:

- Quality terms: bright (7), dark (4), warm (6), cool (8), rich (12), soft (16), hard (11)
- Universal attention to sound colour/timbre

Discussion

In contrast to the norms of academic writing, where a conclusion might offer a closing summary of reflection, this discussion begins with a statement that encapsulates the essence of the findings: Imagery strategies do not exist in isolation. They are embedded in broader pedagogical frameworks, shaped by teachers' training, influenced by their personal learning histories and understood within particular genre contexts. In other words, teaching styles are both variable and deeply personal. As such, the contributors to this study cannot be regarded as simply 'subjects' providing data for analysis, but expert 'human' thinkers whose words deserve to be heard directly. Therefore, where proprietorial IP warrants it, the contributor is named in accordance with the terms agreed to in the signed consent form. Additionally, where it has been agreed, quotations and thick description are used. This humanistic approach serves a dual purpose, as an academic dissertation and as a resource for the wider teaching community. The verbatim reporting may go some way to reassuring less-experienced teachers of something the data revealed about expertise itself; that even elite practitioners operate through real-time responsiveness, creative adaptation, and, perhaps surprisingly, professional uncertainty. Of further consideration for the reader is the positionality of the researcher who is a singing teacher working predominantly in musical theatre and contemporary pop and whose dialogues and interpretation of the data are likely to be influenced by pre-existing base knowledge, areas of professional interest and personal perceptions.

Diverse Pathways to Pedagogical Expertise

The thirteen contributors to this study were recruited through purposive sampling and intended to be representative of a model of 'elite', where the perception of success in the field of voice pedagogy is exemplified by professional standing, client profiling or online presence. The one commonality shared by all of the participants is some degree of personal performance and singing experience. The discussions revealed a striking paradox; despite their 'elite' status, these teachers openly recognise that effective solutions are often pragmatically acquired through trial and error and are not always quantifiable. This finding perhaps adds value to the imperative to preserve some of the in-practice, intuitively developed frameworks captured here. Given the complexities of both teaching and learning singing, and the necessary experimentation inherent in that process, it is perhaps not surprising that the pedagogical process is guided by intuition, previous experience and continually evolving science, and not necessarily affiliated to professional standing or formal credentials (Helding, 2020).

Both Natalie Weiss and John Henny exemplify this paradox; both participants agreed to be interviewed and gave permission to be named. Weiss has had an impressive performance career with singing roles on Broadway and in national tours. Alongside this, she has developed her own brand of teaching that embraces contemporary musical theatre and pop styling, attracting over a million followers across platforms and 30 million views. Similarly Henny, host of *The Intelligent*

Vocalist podcast, openly discusses his lack of formal training and his journey to becoming a prominent voice teacher and author, with a far-reaching roster of clients. In this interview, Weiss in particular, opens up about what might be termed her "fraud paradox", essentially feeling unqualified due to a lack of formal teaching credentials while simultaneously achieving demonstrable success with her clients, including, like Henny, many well-known singers. This paradox illuminates something fundamental about voice pedagogy, perhaps most significantly that Weiss's experience suggests that the most effective pedagogical translation may not necessarily move from science to imagery, but rather from practice to imagery, with science providing possible retrospective understanding of why effective imagery works (Ryle, 1949). This inverts the typical assumption that scientific knowledge must precede effective teaching, suggesting instead that embodied knowledge, reflective practice, and student-centred problem-solving can generate viable pedagogical strategies that science may, or may not, later validate; thus aligning with the pragmatist framework established earlier in this paper. Determining success in the studio could perhaps be measured by the relationship between the goal and the physiological outcome, coupled with student feedback and repeatability (Moss Erickson, 2025; Nafisi, 2010); Helding posits that "a basic tenet of learning from the field of cognitive science holds that a thing is truly learned as evidenced by its repeatability" (Helding, 2020, p.42). For context, Weiss's *Breaking Down the Riffs* framework, discussed later in this paper, is a multimodal approach to learning that encompasses visual, kinaesthetic, spatial and auditory imaging, exemplifying the focussing, filtering, magnifying tenets of dynamic imagination inherent in Wiltsher's Lens Theory (2019, 2022). Weiss, like other participants, has intuitively created a system that is underpinned by existing schools of thought (Estill, 1988; Helding, 2020; Herbert-Caesari, 1951; Kodaly, 1945) and aligns with Evidence-Based Voice Pedagogy (Ragan, 2018, 2022).

Across the interviews, strong links emerge between personal learning experiences and pedagogical philosophy, which may go some way to addressing why teachers adopt certain ways of teaching. If Weiss learned through embodied practice and trial-and-error, how might a teacher whose expertise emerged through intensive auditory training approach imagery differently? Trudy Kerr's practice offers a compelling counterpoint, where Weiss privileges visual-kinaesthetic mapping, Kerr's pedagogy is fundamentally auditory-first, shaped by her early immersion in jazz. Kerr, a well-known jazz singer and leading pedagogue learned to sing by prolonged periods of listening in early life. Kerr, who has given permission to be identified, started singing professionally when she was 16. This commitment to auditory processing comes across as a strong theme in her teaching. Kerr explains that auditory processing can be coupled with hand gestures for pitch direction and note counting, imagining melodic contours, using body movement to support rhythm and visualisations for narrative themes.

Both Weiss and Kerr exemplify practitioners whose pedagogy emerged organically from performance experience, learning by doing, then teaching what worked. For four participants, recovering from injury provoked a commitment to self-education in the fields of physiology, acoustics and the cognitive sciences. Their core pedagogy remains strongly influenced by their

discoveries. Interviewee Andrew Byrne, author of the bestselling book *The Singing Athlete - Brain-based training for your voice,* explains that debilitating elbow pain which affected his piano playing, sparked 20-years of studying the cognitive sciences. His voice pedagogy is firmly grounded in this knowledge, guiding voice students in developing somatic awareness through cognitive training. Another participant specifically requested Byrne to be interviewed for this study, such is the reach of his inspiring approach. Byrne's self-directed journey into cognitive science demonstrates how personal necessity can drive pedagogical innovation. The speech-language pathologists in this study represent yet another epistemological position; practitioners whose clinical training provides direct access to physiological observation through laryngoscopy and MRI. Where Byrne translates neuroscience into imagery, these clinicians translate real-time visual data from clinical imaging into teachable concepts, a form of imagery grounded in literal observation of the vocal mechanism. This is not to say that any of the participants are teaching methods that align exclusively with their own experience, more that the lived experience undeniably underpins the content and approach to teaching. The pattern of these personal experiences informing individual pedagogy is probably not surprising, however, an emerging question that a novice teacher may consider is *what does a singing teacher actually need to know to be effective?* Given that all of these teachers have outstanding credentials and yet have such differing backgrounds and approaches, the answer must lie in the *ways* in which their knowledge is assimilated and communicated to the student. It is this idea of effective 'communication' of scientific ideas, that lies at the heart of this paper and that may provide a small glimpse at the link between Ryle's (1949) "Know What" and "Know How".

Voices From the Studio

Acknowledgement

The author would like to highlight that the following discussion seeks to explore 'grassroots' teaching strategies, with a particular interest in the use of imagistic strategies that are not formally recorded in specialist or academic periodicals or similar. It is a privilege that is weighted in the responsibility of accurate representation and consideration of the Intellectual Property rights of the creators. Therefore, attribution has been honoured where requested or participant consent has been given. Additionally, where appropriate, for context and perspective, background information, such as training or interdisciplinary interest, is provided. These testimonies are generated by individuals and there is no suggestion that one testimony is representative of a broader opinion across those interviewed.

Proprietary Frameworks - Translating Complexity into Accessible Systems

J R Mossman's pedagogy is thought-provoking, highly creative and underpinned by multidisciplinary, validated theories and practices; he discusses his *Actualisation Triangle*, a proprietary framework connecting three domains: *Conceptualisation* (imagining), *Physicalisation* (embodying through lip syncing or movement), and *Actualisation* (performing with voice). This non-

linear, iterative process allows singers to move fluidly between imagination, physical embodiment, and vocal production. Mossman explains that *Feldenkreis, bio-tensegrity* and *fascia* studies offered him the scientific models and experiential practices that aligned with his interest in *lived sensation*. “I was looking to escape mechanics...to see the body in its fullness and in functional unification versus functional isolation.” Bio-tensegrity refers to the push-and-pull stabilising framework of a structure and the energetic relationship within that structure; essentially, the human body is a three-dimensional, inter-connected, dynamic structure that requires self-balancing (de Solorzano, 2020). When one element moves, the entire structure moves in synchronicity, and equally, when there is a collapse, the entire system is thrown out of alignment (de Solorzano, 2020). In singing, Mossman cites examples of how movement in one part of the body, the hips for example, can have an influence on vocal production. Currently there is no accepted universal definition of *fascia,* however, Mossman explains that at its most basic, fascia can be thought of as connective tissue that interlinks and holds the body together, existing through all tissue, including bone. Mossman was the only participant to refer to fascia and bio-tensegrity as part of his pedagogy, however, this commitment to escaping mechanistic approaches in favour of whole-body integration is reflected by overwhelming consensus (context dependent) by the other participants, with one stating that; “voice production is inseparable from full-body coordination.” These propositions are supported through Linklater’s historic work that positions the whole-body tenets of Feldenkreis and Alexander Technique, as pivotal to the psycho-physical approach to voice and speech production (Linklater, 1976, 2019). Given Mossman’s evidence of efficacy, singing teachers might encourage their students to experiment with the principles of bio-tensegrity, by developing awareness through mindfulness of how changes in alignment can impact procedural sensation and physiological output. Mossman’s philosophical framework is underpinned by the concept of "KQ" (Kinaesthetic Intelligence), which exists alongside IQ and EQ; he argues that the body possesses intelligences that often exceed conscious mental understanding, an idea that aligns with Gardner’s Multiple Intelligences Theory (MI Theory) that positions emotions and physical actions as being fundamental to how humans make decisions (Gardner, 1999, 2009). Mossman’s inspiring use of movement and lip-syncing as pedagogical tools reveals this body intelligence; by allowing singers to attend to physicalisation without the distraction of sound production, thereby exemplifying his proprietary *Actualisation Triangle;* “Lip synching creates a relationship between how you imagine what you do, how you do it physically and how it actually happens. Playing with different realms of imagination”. Mossman is emphatic in his belief that the learning must come from the student’s own sensory and procedural experiences and not from the teacher’s linguistic impositions, a tenet that is upheld by several participants. Mossman’s lip synching theory is supported by multiple studies using fMRI, electromyography and Transcranial Magnetic Stimulation (TMS), revealing that imagined movement, including singing (*sub-vocalisation*) activates muscles in the same way as overt movement ((Debarnot, 2014; Jeannerod, 1995; Monany et al., 2022; Moss-Erickson, 2025). This clinical research gifts itself as a means of effective *silent practice* regimens, where the singing student can develop procedural knowledge, through imagination, while also developing musculature, reducing vocal fatigue and enabling practice in environments where audible singing is not possible.

Translational function of imagery

Byrne's approach shares Mossman's commitment to holistic integration, yet arrives there through a different route; where Mossman draws on fascia and bio-tensegrity, Byrne's gateway was cognitive science and nervous system regulation. Both, however, reject mechanistic isolation in favour of whole-body coordination. Given his in-depth study of the nervous system, Byrne treats each session with "fresh eyes", no matter how well established the relationship. He acknowledges the conditions of the moment and how the nature of 'being' is in constant flux. This is perhaps an opportunity for teachers to reflect that students have lives beyond and between their lessons that may have an impact on day-to-day function. Byrne's *Cognitive-Associative-Autonomous Learning* framework uses imagery as a translational tool that leverages existing neural pathways, that are not necessarily connected to singing. He directs students to consider: "What do I already understand that is a shortcut for me to get where I need to go?" He maintains a multi sensory imagery approach, such as his descriptor of the breathing mechanism as analogous to a cafetière; "it's kind of like you're pushing down on the plunger of the French press (cafetière)." In bio-mechanical terms this might be explained as the diaphragm's central tendon descending on the inhale, intra-thoracic pressure decreases and intra-abdominal pressure increases (this accords with accepted science). He posits that such an approach makes an invisible internal process tangible through familiar tactile experience. Examples of Byrne's immediately accessible and creative imagery strategies are recorded in the *imagery matrix* (Appendix A). Beyond Byrne's linguistic descriptions is his practical approach to developing singer awareness of sound conduction through cranial and facial bone conduction. Byrne uses a large tuning fork on the singer's face and skull to enable them to physically feel frequency vibration, positing that this can heighten or develop a sense of 'placement' of sound. This aligns with Herbert-Caesari's inspirational ideas recorded in *The Voice of the Mind* in which he maps the singer's sense of pitch placement (1951). A surprising discovery in Byrne's interview, is his interest in using eye movement and gaze direction for nervous system regulation. Although not directly referenced by Byrne, *Eye Movement Desensitisation and Reprocessing* (EMDR) is a psychotherapy treatment designed to alleviate the distress associated with traumatic memories, supporting Byrne's notion that brainstem activity can shift from fight or flight (sympathetic) to a more restful (parasympathetic) state through eye movement and gaze (https://www.emdr.com/). Byrne encourages students to experiment with changing their gaze direction and perspectives. Interestingly, fellow interviewee, Kutsal, explains a similar concept based on her training in *Acceptance and Commitment Therapy* (ACT), undertaken to assist her clients living with *Music Performance Anxiety* (MPA), (Hayes et al., 2005, 2011). During her interview, Kutsal held a book in front and very close to her face, representing overwhelming thoughts; she gradually moved the book away in a representation of increasing perspective; "If these are your thoughts (indicating the book) and you're looking at them like this, this becomes all you can see. But if you can distance yourself, you can see this is only part of the experience, and there's so much more to it". This Kinaesthetic and visual representation of psychological diffusion is attributed to Juncos et al. (2022). Like several other contributors, Kutsal

is keen to to highlight the necessity for the student to develop their own imagistic experiences and that any student-derived linguistic descriptors, should be re-iterated using identical language, until such time as the student progresses. This aligns with Brown's *Clean Language* model that posits that imagery related language should be generated by the imaginer (2024). Brown's assertion aligns with Pearson's treatise on imagination, that highlights the importance of acknowledging that the intrinsic nature of imagery is so personal as to render it impossible for any outsider to truly assess (Pearson, 2019). Brown, who generously agreed to be interviewed for this paper, raises some interesting observations about how her own early learning journey in western classical singing prompted her later interest in language-use in voice pedagogy. Brown, who now works predominantly in voice rehabilitation, alongside coaching choirs and 1-2-1 singing lessons, explains that many of the imagery strategies in circulation during her training had been in use for over 400-years and were often confusing to her. While there may be an argument that the 'antique' nature of western classical music remains the same, Brown remonstrates that the evolution of the cognitive sciences, strongly suggests that imagery must be guided but not prescribed by the teacher. Fellow interviewee, Dr Ian Howell, who also trained in classical singing, while demonstrating uttermost respect for the work of our forebears, citing pedagogues such as Tosi (1743) and Mancini (1774), concurs with Brown, taking a Bayesian approach that posits that assumptions should be updated as new scientific information is made available (Bayes, 1763). Brown's (2024) *Clean Language* protocol recommends that teachers encourage students to provide feedback on an imagery experience and that this feedback must be precisely reproduced, using the student's own words, while the student continues to learn the task. This carbon copy approach allows for the development of a 'clean' personal lexicon that can manifest in any modality. Brown explains how the protocol works:

> It uses an open set of questions to draw out the student's own imagery, an 'imagery landscape'. So it might be one, two or a hundred images you can draw on through conversation verbally, or you can get them to (physically) draw it through art, through gesture or through embodiment of space. It's very good for personalising the learning. For example, someone might sing a chorus… and I would say to them, so can you tell me a little bit about what that was like after they've sung it, and they might say it it felt a bit "scratchy" they might even do this (a representative gesture) and then a clean approach would be to say okay can you tell me more about scratchy? (Brown, 2025)

Brown concludes that by giving context to the choice of the word, along with the gesture that the student used, it becomes deeply meaningful each time it is used. She also introduces the influence of cognitive scientist, Damasio's *Somatic Marker Hypothesis* (SMH) on her work. Essentially, Damasio posits that emotional experiences and interactions with the wider world, are held in the body, not necessarily consciously, but as somatic memories (Damasio et al., 2005). These emotional markers, can subliminally inform future judgements and decision making, perhaps giving credence to the adage to "go with your gut feeling"; In an interview with Scientific America, Damasio states that "I continue to be fascinated by the fact that feelings are not just the shady side

of reason but that they help us to reach decisions well" (Damasio, 2005). Essentially, Brown describes singing as a process powered and generated through emotional responses and communication, therefore, the manner in which someone is experiencing an emotion in their body, is likely to inform the physiological output. Janice Chapman is a hugely influential figure in the pedagogical community, also cited as an influence on Brown's work; Chapman foregrounds primal sounds or voluntary emotional vocalising as central to holistic voice pedagogy (2016, 2021). To give context to this potentially abstract idea, voice scientist and SLP, Kerrie Obert, interviewed on the Vocalfri podcast (2024) describes how emotional prescription can impose audible changes in sung qualities, as Brown suggests. Obert explains the manner in which vocal folds interact with the emotionally generated breath taken immediately preceding a sung phrase. She demonstrates this by imagining crying or being upset, the vocal folds only partially come together which results in less resistance to the air coming from the lungs, which might manifest in a softer or 'breathier' voice quality. By contrast, a breath issued through emotional excitement, draws the vocal folds tightly together increasing resistance to the air, thereby generating a louder 'heavier' quality of sound, more representative of the emotion. By encouraging students to use these emotional breaths, the singer becomes increasingly aware of changes in sub-glottic (beneath the vocal folds) pressure which can reduce undesirable 'pressed' phonation (too much pressure) or insufficient pressure for the task being undertaken. This approach not only highlights the value of emotional imagination to technical singing, but can also facilitate heightened nuance in performance.

What is emerging from the interviews is a recognition that technical vocal training cannot be separated from psychological, emotional and somatic dimensions, further highlighting the complexities present in the art form. Additionally, that a convergent synthesis of multidisciplinary, validated theories and practices often underpins personal pedagogy, such as Feldenkreis, Alexander Technique, ACT, SMH or the theory of bio-tensegrity (Brown, 2022; Chapman, 2021; Helding 2020; Linklater, 1976, 2019). Many of these disciplines exist in the realms of internal self-awareness, employing cognitive strategies to improve alignment, coordination and movement, along with emotional directives (Linklater, 1976, 2019). Participant 'A' provides further examples of a multidisciplinary approach to the inherent complexities of *emotional coaching* (Kneeland et al., 2023). This participant identifies as a voice coach and a technical singing teacher, encompassing both spoken voice and singing, working with actors and musical theatre performers. Singers are ultimately 'story-tellers' and connecting emotionally with audiences, could be considered fundamental to success. Participant A integrates academic research with embodied and experiential practice, explaining that there are two primary pathways in emotional work; a) students who feel emotion deeply and become overwhelmed, requiring techniques to manage intensity and b) students who struggle to engage with emotion and need tools to access feeling. This differentiation serves as a reminder of the intensely personal nature of voice pedagogy and that the selection of imagery must reflect this (Brown, 2022). Participant A shares several approaches, reflecting the broad range of personal needs; Michael Chekhov's *Psychological Gestures* provides performers with a framework of working 'backwards' from physical embodiment to internalised feeling (Chekhov, 1891-1955). Chekhov, an actor, developed his *Chart of Inspired Action* ostensibly

to remove moments of disconnect between the imagination and the body's ability to express it (https://www.critical-stages.org/15/). Participant A also describes a technical approach to emotion coaching based on *listener perception;* listener perception can remove embodied emotion at peak moments of intensity, which can help maintain balanced vocal production, perhaps helpful to performers who become emotionally overwhelmed (Prochazkova et al., 2017). Of further interest is *Emotional Layering* which involves 'stripping' the voice back to a neutral speaking voice and 'rebuilding' it to a specified target. It is fascinating to note that Kerr and Weiss, although not spoken-voice coaches, also use this intuitively as a method to reduce the cognitive load inherent in sung sound that can result in perceived "excess weight" in the singing voice, in line with Obert's explanation (2024). Throughout the testimony provided by Participant A, is the strong sense of enabling student autonomy through self-discovery, reinforcing the notion that teachers are facilitators of learning and that the student's knowledge, particularly of 'self' is co-constructed; this could be summarised as an iterative process underpinned by imagination and teacher knowledge (Robinson and Robinson, 2022).

This principle of co-construction is engagingly illustrated in Speech Language Pathologist (SLP) Tom Burke's immediately accessible proprietary *Twang Farm.* The SLPs in this study represent yet another epistemological position; practitioners whose clinical training provides direct access to physiological observation through laryngoscopy and MRI. Where Byrne translates neuroscience into imagery, these clinicians translate real-time visual data from medical imaging into teachable concepts, a form of imagery grounded in literal observation of the vocal mechanism. Burke's work is not merely distinguished by its creativity, but its grounding in voice science, motor learning principles, and neurological insights from his background. Originally a musician with ambitions of performing in musicals, Burke qualified as a speech-language pathologist (SLP) working with head and neck cancer patients. He explains that he developed an interest in neurology through this work, which profoundly influenced his understanding of how concepts can be encoded through multiple neural pathways. It is perhaps not surprising that his pedagogy, although broad, is underpinned by his in-depth knowledge of laryngeal function and the associated cognitive sciences. Like Mossman, Burke rejects mechanistic isolation of vocal components in favour of systemic coordination, a pedagogical stance that aligns with Lens Theory's emphasis on dynamic, interconnected processes rather than fixed techniques.

Cross-genre & cross-disciplinary innovation

Burke explains the origins of his framework:

> A client, who was a fantastic singer but almost had too many voices and never knew where to put it. So she could belt and mix and she had a beautiful head voice and had a breathy sound, but when she would approach music, she would get in her head because she didn't know which part of her voice to place it in. And so, I wanted to ground her and make voice science simple, so that we had a way of talking about *where* to put your voice for Adelaide

> in Guys and Dolls is different than, say, Christine in Phantom of the Opera. And without over-complicating it. And so, the Twang Farm really came out of trying to explain to this one student that, think of your voice like operating on an X, Y, and Z axis…

The Twang Farm presents as a drawn imagistic framework using a three-dimensional coordinates system populated by animal characters, each embodying a distinct constellation of vocal qualities. For example, in his schema, the owl represents a breathy head voice with low larynx, using aspirate onset through the "h" sound in ‘whoo’. Burke physically draws this chart with students, plotting different vocal qualities, essentially creating a visual and conceptual roadmap for vocal versatility. Several key principles emerge from his teaching approach; his concern for psychological safety and creating non-judgemental environments and using playfulness as a deliberate means of reducing inhibition and encouraging experimentation. Through the Twang Farm, Burke delivers a system that not only develops student autonomy in identifying pathways to goals, but provides ‘choices’ in approach through auditory, visual, spatial and kinaesthetic imagery. Along with two other participants, Burke is an Estill Master trainer, however, his pedagogy is informed by a ‘quality-first’ approach; in practice, this means the student aims to achieve a sound quality (as defined by the Estill Figures) before deconstructing the bio-mechanical and acoustic principles that underpin that sound. For context, Jo Estill (1921-2010), a world-renowned educator, researcher and singer, developed her proprietary *Estill Voice Training System* (1988) to help singers, take control over muscle groups in order to achieve specific voice qualities: Speech, Sob, Twang, Falsetto, Belt and Opera. She was able to account for how the vocal tract could produce an infinite range of sounds, thus linking vocal physiology to artistic choice. One participant reveals Estill’s figures as a diagnostic tool rather than an instructional tool; “Estill is in my ears, but never on my tongue”. Participant B, a distinguished Speech Language Pathologist, was an early adopter of Estill’s Figures, detailing Estill’s proscribed use of hand gestures in teaching, explaining the neuroscience of using gestures over verbal instructions to facilitate motor learning, rather than motor acquisition; C highlights the distinction between initial *motor acquisition,* where didactic instruction is helpful and *motor learning* where gestures and mirror neurons are more effective because they bypass linguistic processing; “Motor learning is a process that is inferred rather than directly observed that leads to permanent changes in habit as a result of practice” (Helding, 2020, p100). For example, B describes gestures for twang quality (fingers together like holding a cup), widening the vocal tract for timbre adjustment (opening hands, triangle shape) or creating brighter sounds (pointing upwards) (Estill, 1988).

Student centred; multiple pathways to autonomy

Like the Twang Farm Weiss’s *Breaking Down the Riffs* (BDTR) offers multiple modalities for learning; essentially, the singer learns to deconstruct riffing patterns through auditory processing, visual imagery and gestures. Weiss explains that as a session singer, she would often be expected to sing without the aid of notation and it would be necessary for her to codify the music in a way that allowed her to ‘read’ the melodic contours. BDRT evolved from these early learning principles.

This is a linear system that begins through drawn ‘dashes’ representative of the notes to be sung, aligned in a way that suggests pitch interval relationships. Each note is then assigned a number, with the same number representing recurring pitches, Weiss never uses note names, which suggests a democratic system that is open to those without formal notation training. Once the contour of the riffs is learned through auditory and visual processing, along with hand gestures often denoting pitch direction or head tilts that can be representative of a tacit moment or of notes that might be ‘missing’ (helpful in identifying intervals by tilting the head in the ‘space’ where the perceived ‘missing’ note exists in the imagination) the learner will sing the notation, firstly using the assigned numbers (“one-two-one-five-two-one”) before adding percussive sounds (“dah, dah dah, doh”). These can then be combined in a way that is representative of the rhythmic characteristics of the riff. Through Lens Theory (Wiltsher, 2019, 2022), BDTR functions as a focusing mechanism directing students' attention to specific melodic contours, rhythmic patterns, and tonal qualities by translating abstract musical notation into spatial-visual representations. The framework does not simply present information, it filters complexity, breaking intricate vocal runs into manageable components while magnifying the kinaesthetic and spatial dimensions that might otherwise remain implicit. By breaking down the riffs in this way, Weiss intuitively uses a form of *chunking* in her pedagogy. The concept of chunking evolved from research in cognitive psychology in the 1950s on the capacity for processing and retaining information. The term, formalised by Miller (1956), posits that short-term memory is effectively increased when information is received and coded in meaningful units (chunks), which ultimately enables faster retrieval and longer term retention. Weiss’s approach, which has reached millions, exemplifies this in a pedagogy that is multimodal, democratic and strongly influenced by her personal learning experiences.

Henny makes an interesting observation about teacher’s past experiences, positing that it is not always necessary to be “a world-class singer themselves in order to be highly effective”. As all the interviewees are or have been, singers, the author considers whether it is possible to train as a singing teacher without being a singer first? Participant B posits that “living it in your own body” enables the translation of observations from laryngoscopy and MRI studies into practical teaching imagery, which suggests that some degree of singing proficiency is necessary. Henny, recognised as an articulate and knowledgeable voice teacher with a significant platform in the voice pedagogy community, positions communication, empathy and the ability to diagnose, as central to successful pedagogy. Like Brown and Burke, his philosophy is a student-centred approach, advocating for practical, sensation-based learning before any bio-mechanical understanding. He does however, emphasise the importance of students’ knowledge of basic voice function to navigate the “fire hose of information” in the modern digital age. Henny discusses how a personal health context directed his attention to the effects of aging on the voice; this personal experience of navigating vocal challenges as an aging singer is now central to his pedagogy, specialising in work with older singers. He shares insights into the weakening of vocal tract muscles and the need for balance between relaxation and necessary muscle engagement. Participant B highlights the importance of language choices when discussing ‘relaxation' in singing, positing that singing is effortful and requires “energy” and therefore energy and effort are vital to efficient function. With a clinical

interest in tongues, B uses the analogy of ‘tug of war’ to explain that the tongue requires energy in the front and the back portions, and when tongue tension is suspected, the solution must not be to ‘relax’ the tongue but to rebalance the energy.

Phonetic & kinaesthetic intelligence

A significant theme emerging across the interviews is that teachers develop specific areas of expertise often informed by their personal experiences; Howell, who trained as a classical countertenor, suffered a voice impairment (laryngeal nerve paresis) leading to deeper scientific enquiry and to the integration of laryngeal and acoustic science. Dr Howell has become highly regarded for his expertise in psychoacoustics and acoustic science and for his theory that, just as humans perceive light frequencies as colours, we perceive sound frequencies as bright and dark and that vowels possess tone ‘colours’; his proposition is known as *Absolute Spectral Tone Colour* (ASTC) (Bozeman, 2017, Howell, 2016). Kutsal, who trained in interior acoustics (buildings) before moving in to music and voice acoustics, references Howell’s work in her own practice. She describes facilitating the creation of a voice ‘colour wheel’ similar in concept to a painter’s palette where her singers assign colours and shades to sensation or perceived sound. Once the base colours are created the singer will try mixing, adding or taking away “a bit less silver.. or more blue”. Participant B, vividly describes their discovery of ‘colours’ in their own training: “I was missing a whole set of cooking possibilities in my recipes, a whole spice cabinet, if you will… then mapping the perception [of spices] and the related acoustics, my ears became more tuned to a much wider range of colour possibilities”.

Howell’s approach takes an unexpected deviation from some of the recurring themes revealed so far; his multi-genre pedagogy emphasises behavioural understanding of vocal function before aesthetic refinement, resonating, to some degree, with Burke’s approach to prioritising functional coordination before stylistic elaboration. The debate between quality-first and component-first pedagogy reflects different uses of imagination's filtering function; Burke's approach filters out technical complexity initially, allowing students to focus entirely on auditory-aesthetic targets and Howell's approach filters differently, prioritising proprioceptive awareness and motor control before introducing interpretive variables. Both strategies align with Lens Theory to selectively focus attention, but on different aspects of the vocal task. Howell believes that it is the functional coordination of the ‘direct control factors’ of pitch, loudness and timbre, as direct perceptual targets that must be established first, with imagery used post-hoc if necessary. It is not that Howell rejects metaphorical imagery but positions the stated control factors as "sub-metaphor, sub-artistry, sub-genre” and fundamental to vocal production regardless of style. In line with other contributors, when the student experiences a successful coordination of these, Howell encourages them to describe it in their own terms, often non-verbally, to enhance repeatability. This co-construction of imagery (student generated, teacher facilitated) re-enforces the notion that imagination is a dynamic, procedural mechanism rather than a fixed repository of metaphors. When Kutsal asks "how can we make it more burgundy?", she is not imposing a pre-determined image but inviting the

student to actively manipulate and transform their mental representation of “burgundy” sound. This aligns precisely with Wiltsher's (2019, 2022) argument that imagination involves "active manipulation and transformation of mental content" rather than passive reception. Howell discusses the *Perception-Production Paradox* which sits at the intersection of voice production and perception and describes how singers hear their own voices differently when producing sound. He explains that certain frequencies are more sensitive to the ears and others are acoustically under-perceived, which can lead to students being unnecessarily self-critical. Participant C also acknowledges this challenge but highlights the benefits to teachers of merging knowledge from adjacent fields of study (in this case, acoustic science) to help direct their students’ understanding. A final thought for singing teachers, suggested by Participant B, is to accept that when new knowledge emerges, to remain uninhibited and steadfastly open to opinion shifts. As practitioner researchers and as learners, the process is iterative and can be “messy and chaotic… and sometimes deeply rewarding” (Helding, 2021).

Conclusion

This study set out to investigate how experienced singing teachers conceptualise and enact the translation of vocal science into studio teaching, with particular attention to the role of strategic imagery frameworks. Through in-depth interviews with thirteen elite practitioners representing diverse pedagogical lineages, genre specialisations and training backgrounds, this research has generated findings with both theoretical and practical significance for the vocal pedagogy community.

The most tangible outcome is the creation of the *Imagery Matrix*, a systematic catalogue of 71 imagery strategies documented across all thirteen participants. This matrix represents the kind of practical scholarship that practitioners can immediately integrate into their teaching. What distinguishes this matrix from existing imagery collections is its grounding in Evidence-Based Voice Pedagogy (EBVP). Beyond its immediate practical utility, the matrix reveals patterns in how elite teachers think, demonstrating across the interviews that teachers' own learning histories profoundly shape the imagery strategies they co-construct and the pedagogical frameworks they build. Kinaesthetic and multimodal imagery strategies predominate, reflecting contemporary understanding that vocal learning engages multiple sensory systems simultaneously.

Perhaps one of the study's most unexpected findings challenges conventional assumptions about what qualifies someone to teach singing effectively. The thirteen participants arrived at pedagogical expertise through strikingly different routes: conservatoire training, apprenticeship models, performance careers, injury-driven self-education, speech-language pathology, acoustic science, somatic practices and cognitive neuroscience. The data also revealed that cross-disciplinary knowledge enriches pedagogical practice. Teachers who integrate insights from fields beyond traditional voice pedagogy, such as fascia research, bio-tensegrity, cognitive neuroscience, motor learning, performance psychology and somatic practices, demonstrate particular creativity in

developing imagery that bridges scientific understanding and embodied experience. What distinguishes the proprietary frameworks revealed in the data, from simple imagery collections is their systematic, theoretically coherent structure; they do not offer random metaphors but rather organised systems that translate complexity into accessible systems (Burke, Mossman, Kutsal, Weiss). Through Lens Theory (2019, 2022), these frameworks function as procedural, dynamic tools that focus attention, filter complexity, magnify principal features and transform abstract concepts into embodied experience.

Wiltsher's Lens Theory (2019, 2022) has been invaluable as a framework for understanding the imagery strategies documented in this study. Rather than treating imagery as a collection of fixed metaphors to be catalogued and replicated, Lens Theory illuminates how imagination functions as a dynamic, procedural mechanism focusing, filtering, magnifying and transforming abstract concepts into embodied experience. The elite practitioners in this study demonstrate mastery not of specific images, but of the lens-work itself; the ability to select, adapt, refine, and co-create imagery in real-time response to student needs. While these frameworks provide structure, elite teachers do not impose imagery rigidly but rather invite students into collaborative, deeply human, meaning-making. This distinction suggests that novice teachers may benefit less from memorising imagery examples than from developing the skill of imaginative adaptation in ways that serve each unique learner. In essence, these elite ‘voices from the studio’ have highlighted the irreplaceable value of expert human judgment, intuitive responsiveness and the relational co-construction of knowledge that characterises the voice studio at its best.

Personal Reflection and Transformative Learning

I have chosen to adopt a first-person perspective to reflect the significant personal and professional impact of this study; a decision that accords with the ‘lived’ experience that is convergent with the phenomenological underpinning of the study.

This research has fundamentally reshaped my professional practice and identity as a singing teacher; through engagement with voice science literature, cognitive research and most significantly, through dialogue with the thirteen elite practitioners interviewed here, I have developed a theoretical vocabulary for articulating what I previously understood intuitively. Beyond self-awareness, this research has expanded my pedagogical toolkit exponentially. I have integrated elements of Burke's Twang Farm into my teaching, adapted Kutsal’s and participant A’s third-person ‘perspective’ experiences, I have developed my understanding of Mossman’s use of bio-tensegrity to explain functional voice production. Howell’s (possibly unconscious) use of his hands to describe the upward and forward motion of the larynx has been integrated across my practice, with demonstrated success. These are not superficial borrowings but deeply considered integrations, filtered through my own pedagogical philosophy and adapted to my students' needs.

Perhaps most significantly, this research has connected me to a community of practice that extends far beyond my solo studio. Building relationships with leading practitioners, some of whom I had admired from afar for years, has been professionally and personally enriching. These connections have raised my profile within the voice pedagogy community, opened doors for future collaboration and reminded me that even elite practitioners operate through uncertainty, experimentation and continuous learning. This realisation that expertise is not about having all the answers but about developing sophisticated processes for finding context-specific solutions, has been liberating.

The research process itself embodied the "messy and chaotic" iterative learning that Helding (2021) describes. My initial questionnaire failed to recruit participants, forcing me to redesign the methodology. Interview transcripts revealed concepts and themes that required me to augment my literature review, for example, Coffin's teachings on vowels, Linklater's embodied voice hypothesis, Chekhov's psychological gestures, tensegrity, fascia and motor learning science. Prior to my research I completed Heidi Moss Erickson's *Certificate in Neuroscience and Voice*, which I was able to refer back to in order to match motor learning principles to the teaching strategies described in the transcripts. The literature review had a considerable impact on my ability to structure pertinent questions and be able to discuss the themes arising in a confident and well-informed way. Occasionally, my own experiences did not align with those posited by the participants; I found those moments thought provoking and enriching. For example, *breath support* and *breath control* are often presented as conflated terms in the recorded data, most often as *breath support*, whereas Helding's (2021) explanation of the differences between these concepts, revealed in the literature review, is compelling. The imagery matrix includes several examples of breath control being described as breath support, which poses the question of whether to include data that is potentially inaccurate. This dichotomy is a reminder of the pragmatic nature of studio practice and of the value of evidence-based practice; essentially, that what presents as contextually successful, has value, even if it is not convergent with science (Ryle, 1949). I concluded that my role as the researcher is to faithfully represent the 'voices from studio' and to accurately report how experienced singing teachers *conceptualise and enact* the translation of vocal science into studio teaching. When considering the breadth of my own newly acquired knowledge, I am more aware than ever of how much more learning is required and that no single teacher can know everything. These challenges were not obstacles but essential features of authentic inquiry moments where I had to adapt, refine, and transform my approach, much like the imaginative lens-work I was using (Wiltsher, 2019, 2022).

Limitations and Future Direction

Reliance on interview data means this research captures participants' self-reported practices rather than observed teaching behaviours. While these interviews provide rich insights into how teachers conceptualise their work, they may not fully capture the intuitive, moment-to-moment adjustments that occur in actual studio sessions. Equally, the data centres entirely on teacher perspectives, with

student experiences represented through teachers' reports of student feedback, therefore any future research might benefit from a student-centred perspective. The 30-minute interview duration, while appropriate given participants' professional schedules, was sufficient to generate rich data, but limited the depth of exploration for some topics. For example, how future technologies will shape voice pedagogy and the ethical dimensions of imagery use, particularly when it becomes counterproductive and the responsibility of teachers in this respect. These questions arose peripherally in interviews but require dedicated ethical analysis that is not practical, given time and word-count constraints.

Insider Positionality

My position as a singing teacher and practitioner-researcher offered advantages in rapport-building and shared professional language, but also carried risks of interpretive projection and confirmation bias. My own pedagogical preferences and genre background inevitably shaped which themes I noticed, which follow-up questions I asked and how I interpreted ambiguous statements. On one occasion I did not understand what was being posited and felt it more ethical to exclude this data for fear of misrepresentation.

Final Thoughts

This work-based learning project has achieved its intended outcomes; I have not simply produced an academic dissertation, I have undergone professional development that will continue to shape my teaching for years to come. The Imagery Matrix exists as a living resource for anyone who wishes to make use of it. The theoretical frameworks inform my lesson planning. The relationships with practitioners continues through ongoing dialogue. And the meta-skill of reflective, evidence-based practice has become central to my professional identity.

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Appendices

Appendix A: Imagery Matrix
Appendix B: UWTSD Ethical Clearance
Appendix C: Examples of Coding and Data Analysis
Appendix D: Participant Information Sheet
Appendix E: Participant Consent Forms

Appendix A: Imagery Matrix

Imagery Strategy	Intended Outcome	Pedagogical Domain	Imagery Type	Sensory Modality	Theoretical/Scientific Basis
“Whimpering puppy”	Modulation of airflow and subglottic pressure and pressure / volume decrease OR soft palate awareness	Breath Management / Nasality	Linguistic Metaphor	Kinaesthetic	Can reduce subglottic pressure and tension. Promotes sense of elevation of soft palate.
Ascribing colours to tonal qualities: “it sounds silvery or it sounds metallic”	Facilitates modification of tonal quality	Vocal Tone	Linguistic Metaphor	Visual/Kinaesthetic	Vocal tract resonance modification
Listening to recordings of artists to establish desired tonal quality target	Development of target acoustic output	Vocal Tone	Auditory Modelling	Auditory/Kinaesthetic	Vocal tract resonance modification
Creating a visual ‘map’ of sound options; “on the top, you're going to flip, like Whitney Houston flips up to an owl and then she's going to do the sheep here… listen to a song and map out what the singer does with the different characters (co-created with student)	Vocal placement using animal sounds as framework	Vocal Tone / Passaggio Navigation	Multimodal	Auditory/Kinaesthetic	Vocal tract resonance modifications
The Alien as Acoustic Metaphor boosting and suppressing harmonic frequencie	Vocal placement using ‘fun’ sounds	Vocal Tone	Acoustic Metaphor	Kinaesthetic	Vocal tract resonance modification
“keep listening and then actually be able to hear it whilst you're not actually listening, but it's running around in your head”	Improved delivery of melody and stylistic detail	Melody Acquisition / Vocal Placement	Audiation	Auditory	Evolutionary principles of speech acquisition through subvocalisation through mimicry and repetition. sub vocalisation activates vocal tract muscles through mental imagery
“A rapper generally talks about flow as the rhythm and where it's going”	Evoking sense of movement and energy through the phrase	Phrasing	Spatial Mapping	Visual/Kinaesthetic	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
Creating written cues aligning with melodic contour and intervals: Horizontal lines representing pitch movement as a notation system. Arrows for pitch bending or scooping and squiggly lines for multiple notes.	Visual cues for learning melodic patterns	May provide faster processing for some learners, as visual contour directly maps to melodic shape.	Visual / Kinaesthetic	Visual	Aligns with cognitive science: leverages spatial working memory and visual pattern recognition rather than requiring symbolic decoding (traditional notation).
The color wheel of sound spectrum. My client “felt the chest voice or the deeper darker sounds that we make in the lower register as burgundy shaped or burgundy coloured, so, using her language, I asked her how can we make it more burgundy? How can we make it darker? How can we add a little silver to that burgundy? For some clients twang is yellowy, brighter, shinier tones.”	Using colour palate to develop changes in vocal tone representative of mood, genre etc.	Vocal Tone / Timbral Modification	Visual / Kinaesthetic	Visual	Vocal tract resonance modifications
“Roots coming from your feet going through into the ground” (physical grounding)	A sense of physical grounding, that seeks to remove tension from the throat and more stabilisation in the sound	Breath Support	Linguistic Metaphor	Kinaesthetic/Proprioceptive	Control of sub-glottic pressure
Mental body scan incorporating color changes (red to gold for tension release)	Reduction in stress through visualisation	Performance Anxiety	Visual / Kinaesthetic	Visual/Kinaesthetic	Aligns with Body Scan meditation techniques and Mindfulness-Based Stress Reduction (MBSR)
The use of tonal descriptors (bright, dark, cover) used only when students' perceptual targets are misaligned	Tonal / acoustic targets	Vocal Tone / Timbral Modification	Linguistic Metaphor	Kinaesthetic	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
“I learned how to sing by endless listening of Mariah Carey and Whitney Houston” encouraging students to spend time listening and imitating	Acquiring tonal targets, melodic patterns and genre defining style markers	Melody Acquisition / Vocal Placement	Audiation	Auditory/Kinaesthetic	Evolutionary principles of speech acquisition through subvocalisation through mimicry and repetition. sub vocalisation activates vocal tract muscles through mental imagery
The singer should not remain entirely static “movement is incredibly important with singing. Show the student examples such as Celine Dion’s grounding and use of fists for higher notes, Rod Stuart lifting chest and opening the body.”	Stability, ease of sound production. Permission to move!	Breath Support	Movement-Based	Visual/Kinaesthetic	This aligns with contemporary research on embodied cognition and whole-body coordination in complex motor tasks. Validates natural, intuitive movement
Listening to artists and “feeling their voice in your own body”	Somatic awareness	Melody Acquisition / Vocal Placement through modelling	Audiation / Kinaesthetic	Auditory	Evolutionary principles of speech acquisition through subvocalisation through mimicry and repetition. sub vocalisation activates vocal tract muscles through mental imagery
Listening to different genres and allowing the student to identify stylistic markers can be playful and encourage exploration of the student’s own voice; for example “Jane Monheit, trained as a classical singer and you can hear it's quite lyrical in how she sings, but she's a fantastic jazz singer”.	Encourages genre exploration and promotes physical awareness of the outcomes of vocal tract reshaping	Genre-Specific Style	Auditory Imagery	Auditory	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
The student is encouraged to critically reflect on recordings of their own performances.	Identifying strengths and areas for improvement, sets goals	Auditory Processing	Auditory Imagery	Auditory	Acoustic science demonstrates that singer perception of sung sound influenced by internal vibrations, not accurate representation of acoustic phenomena (Capalbo, 2026)
Hand gesture representing twang quality; “I pull the fingers together like I'm holding a wine glass… I might try other things sometimes, for example by pointing upward to raise the larynx or to create a brighter sound a sound that is going to energise the upper part of the spectrum more than the lower part of the spectrum and so sometimes that upward pointing up is an equally effective gesture”.	Using priming cues, including hand gestures from the teacher to elegies the upper partials of the sound	Vocal Tone / Timbral Modification	Gestural	Kinaesthetic	The teacher pointing or pulling the fingers together (“as if holding a wine glass”, a preconceived gesture that simulates the narrowing of the pharynx), allows the student to immediately understand the need for ‘narrowing’ without the need for cognitive overload through words or scientific descriptors.
Wide hand gesture or space between the hands like “goal posts” indicates a widening of the pharynx for darker tone or “de-twanging”	Reducing twang quality	Vocal Tone / Timbral Modification	Gestural	Kinaesthetic	The widening of the pharynx reduces twang and boosts lower harmonic frequencies
“Add more size” in chest voice. The consideration of the notion of ‘size’ can be useful in respect of volume and tone.	Increases ‘depth’ of sound	Vocal Tone	Acoustic Metaphor	Kinaesthetic	Can produce changes in sub-glottic pressure contributing to loudness or ‘thickness of sound. Equally, the words ‘more size’ might contribute to widening the pharynx to boost lower frequencies
“*Itchy teeth* is how one student described finding forward resonance in chest voice through ‘buzzing’ in the mouth, lips and teeth.”	To deliver forward placement of resonance (as opposed to acoustic energy in the throat)	Vocal Tone / Timbral Modification	Linguistic Metaphor	Kinaesthetic	Acoustic studies demonstrate that pharyngeal and oral resonances possess differing harmonic clusters which can be manipulated by the singer

“The *Unicorn* or the *Diver* for high belt. Placing the sound initially at the mouth and then letting it travel up through the cheeks and then like as the high belt moves, it goes to the middle of the brows, top of the forehead. Start by tracing the acoustic journey with a hand that eventually becomes a unicorn’s *horn* going forward from the top of the forehead or have the singer lean forward for the same effect.”	Enabling high belt with ease	Vocal Tone	Linguistic Metaphor	Kinaesthetic	This aligns with Caesari’s vocal pitch-related sensations (1951)
Squatting (bending knees) as notes go higher	Oppositional to ‘pushing/reaching up” for notes thereby reducing strain	Effort Reduction / Upper Register	Kinaesthetic	Kinaesthetic	High notes are perceived to be physically higher, they are often felt higher in the head. Pushing from the throat can cause pain and injury
Ascribing the word “weight” to a voice, for example, increases and decreases in weight. Weight “removal” is a central metaphor in the practice. For example, a roller coaster; “like the motion of going up and back on a rollercoaster, then going down or like you’re going on top of a hill and you’re coming down and you feel weightless or a reduction in weight…laying with the sense of weightlessness”	A reduction or increase n loudness, a reduction in effort (too much weight) or preventative measure for a singer pushing the air aggressively through the vocal folds	Effort Reduction / Dynamic Control	Linguistic Metaphor	Kinaesthetic	The “weight” metaphor refers to multiple physical phenomena: excessive subglottic pressure (pushing too much air) or extrinsic muscle tension (perhaps neck, jaw, tongue tension) or hyperadduction (when the vocal folds are pressed too tightly) or inappropriate resonance strategy (driving sound forward with force rather than allowing natural resonance)
Imagining squeezing a tube of toothpaste. This metaphor is particularly effective because it provides: 1. Directional information (bottom-up vs. middle-out) 2. Relate to a familiar Kinaesthetic experience 3. Implicit sequencing (squeeze travels upward) 4. Prevention of counter-productive patterns (clavicular breathing, mid-torso gripping)	Breath support. Allows the sensation of direction through association with a familiar Kinaesthetic experience (squeezing toothpaste)	Breath Support	Linguistic Metaphor	Kinaesthetic/Proprioceptive	Stabilisation contributes to balanced pressure and flow through appropriate sub-glottic pressure. The metaphor may suggest no gripping
Visualisation of the movement of the diaphragm; The singer puts hands and elbows together in front of their body, as they breath in the elbows come out and the hands to mid-line, thus mimicking rib and diaphragmatic movement.	Allows singer to associate movement with cycle of breathing and avoiding high clavicular breathing	Breath Control / Awareness	Movement-Based	Kinaesthetic	Creates immediate proprioceptive feedback using accessible body parts (arms) to model less accessible areas (ribs). The geometric relationship (downward movement causing lateral expansion parallels the actual physiological action. Provides a self-assessment tool students can use independently. Wider expansion of ribcage may be more efficient in singing, in opposition to high shallow, clavicular breathing
Technology: Many singers respond very well to the visual feedback provided by the spectrogram	Singers can see the harmonic distribution in their voices, in real-time. This can develop a Kinaesthetic awareness of harmonic frequencies	Pitch / Tonal Awareness	Visual Biofeedback	Visual/Kinaesthetic	Spectrographic software breaks down the harmonic components of a singers voice. The singer can learn the sensations of dampening or boosting particular frequencies. The spectrograph can also provide the singer with pics accuracy read-outs.
Tongue mapping, allows for more awareness of tongue movement, shape and tension	Tongue awareness can inform tonal quality and highlight tension	Tongue Tension Release / Tone	Movement-Based	Kinaesthetic	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
The tongue can be a bit like a *sitting toad* just before they leap forward	Tongue awareness. The tongue moves forward from the back.	Vocal Tone	Linguistic Metaphor	Kinaesthetic	Gives a good mental image of the tongue’s shape and position
Low notes can be thought of as a puppet on a string. Controlled from above and light.	Prevents singer ‘grave-digging” and putting pressure on the larynx to achieve low notes	Vocal Tone	Linguistic Metaphor	Kinaesthetic	Exerting pressure by pushing on the larynx can lead to vocal cracks and discomfort
“Feel the sound swinging back and forwards, like a swing on the front porch of a western ranch house. So when you're sitting here alone, it's there, and as you go up to the high note, it goes up behind you”. Try this on a siren.	Gives a sense of ease while maintaining stability in the voice. Evenness of tone	Vocal Tone	Linguistic Metaphor	Kinaesthetic	All sung sound is generated through the actions of the vocal folds. Imagining that it moves around the body with changes of pitch can produce inconsistencies
“Riding a bike round in a circle” for legato	Allows the singer to create the mental image of smoothness through the phrase (legato)	Tone / Phrasing	Linguistic Metaphor	Kinaesthetic	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
Transposition: singer performs same song in different keys	Exploratory. How does it feel in different keys	Performance		Kinaesthetic/Proprioceptive	Comparative exercise may promote better internal sensation awareness (interoception)
“Internal keyboard” can help students locate pitch sensation internally, which is particularly useful for students with pitching issues. Develops internal sensation awareness)	Internal sensory pitch awareness	Pitch / Tonal Awareness	Linguistic Metaphor	Kinaesthetic/Proprioceptive	This theme connects to contemporary understanding of the importance of interoceptive awareness in skill acquisition and performance, suggesting that imagery can serve to heighten sensory discrimination and internal proprioceptive feedback (Caesari)
Resonance and “Above the Note” Imagery	Improved tone / pitching in higher ranges	Pitch / Tonal Awareness	Spatial Mapping	Visual	By imagining ‘coming’ down onto the note, the singer is less inclined to push upwards inviting stress into the system
So if I’m trying to get someone to understand the function of an external oblique contraction, a concentric contraction, I will say, “Hey, just mime some bowling for me. Show me that.” And they do it and I’m like, “Do you feel what happens to your abs there?” And now reach for your seatbelt. So imagine you’re reaching back to get your seatbelt. So that would be an eccentric, a lengthening contraction of the external abdominal oblique. So to not have to go through all this anatomy of like, “well, it’s, you know, contralateral and rotation,” all this stuff, you can just say, “go bowling, reach for your seatbelt.” And that is that associative learning to understand in this case some dynamics of oblique musculature.	Stability	Breath Support	Movement-Based	Kinaesthetic	By likening the sense of abdominal activation with every day familiar task, the singer is able to activate the muscles associated with stability in singing thereby reducing cognitive load.
Creating a “Bubble” with flexible boundaries (student controls who is included) useful for performance	Performance anxiety technique, allowing a sense of being in control and of being nurtured	Performance Anxiety	Spatial Mapping	Visual	Empirically validated through pedagogical practice (EBVP); mechanism requires further research.
Placing “mirrors around the outside” of the body during performance, reflecting negativity away	Performance anxiety technique	Performance Anxiety	Spatial Mapping	Visual	Empirically validated through pedagogical practice (EBVP); mechanism requires further research.
“Golden beam of light” through crown and body imaging the sound as horizontal or directional	Improves stability, reduces effort in sound production improving phrasing	Tone / Phrasing	Spatial Mapping	Visual	Reduction of cognitive load and physical demands of feeling pitch as multidirectional
Using hands to denote pitch direction can be helpful in early learning stages	Spatial association of pitch direction as aid in melodic acquisition and awareness of pitch accuracy (when used by teacher)	Pitch Accuracy / Melody Acquisition	Spatial Mapping	Kinaesthetic	Simple prompt to reduce cognitive load. Teacher and/or student can use prompt

Finger tapping useful counting notes and rhythmic patterns in melismatic singing	Improvement in rhythmic precision and pitch accuracy along with memory in melismatic singing.	Melismatic Singing / Ornamentation	Movement-Based	Kinaesthetic	Reduces cognitive load, drawing attention away from the attention required for breath, phonation resonance etc. while giving a physical framework within which to anchor melody
“Basketball arm” (bouncing an imaginary ball to a rhythm) or body movement to assist in learning to sensationalise rhythm	Learning to “feel” rhythm	Rhythmic Accuracy	Movement-Based	Kinaesthetic	Allowing the body, or arm, to provide visual and Kinaesthetic reference to rhythm, can help internalise
Using movement or dance, clapping the rhythms	Learning to “feel” rhythm innately. Improves rhythmic accuracy	Rhythmic Accuracy	Movement-Based	Kinaesthetic	Provides visual / Kinaesthetic interpretation of rhythm as a step to internalising
Learning from rappers: “no rapper stands still… they’re thinking about flow and shape the whole time, and you'll see them using their body and, and acting out the story” Encourages students of all genres to move while they sing “why should they stand still in a lesson?”	Observable improvement in sound production, reduced self consciousness, more energised story-telling	Performance / Performance Anxiety	Movement-Based	Kinaesthetic	Allowing the body to move naturally seems to reduce physical stress in the vocal tract. Empirically validated through pedagogical practice (EBVP); mechanism requires further research.
“Someone’s got you on a string” or “meat hook” for alignment	Postural cues	Postural Alignment	Kinaesthetic	Kinaesthetic	The value of alignment on voice production is recognised and any sense of whole body lengthening can contribute to the ease of the process
“Putting your umbrella up” in the back of the throat	Contributes to sensation of space (the underside of an open umbrella) and raising of the soft palate responsible for nasality	Vocal Tone / Nasality	Spatial Mapping	Kinaesthetic	The elevation of the soft palate diverts air from the nasal cavity to the oral cavity, thus reducing nasality. Additionally, helpful for singers to ‘place’ the sound on higher pitches
“Like sitting on a shelf sort of a thing. It’s the notes coming out of nowhere, like you’re sitting on a shelf. As opposed to reaching up”	Reduction in effort on higher pitches	Vocal Tone	Spatial Mapping	Kinaesthetic	High notes are perceived to be physically higher, they are often felt higher in the head which can lead to singers pushing to achieve them. Pushing is shown to be unhealthy and detrimental to tonal quality and pitch.
“Taking the weight out of the sound get the student to say “Hey,” then I’ll usually have them to put their hands up (to follow the feeling of the sound) so that the sound is traveling to the soft palate like up and back and then it travels forward. I am trying to get them out of the climbing, shoving land using this motion. It just sort of like takes the weight out”	Reduction in effort	Vocal Tone	Spatial Mapping	Kinaesthetic	Using their hand to represent the journey of the sound. Directing it to the soft palate and forward using a spoken word to begin with.
Fingers moving in circles by the ears like Princess Leia buns can help singers maintain speaking quality as they ascend in pitch. Using fingers to draw circles in the air where the ‘buns’ would be for demonstrating where the feeling is active. The continuous circular movement along with a slight elevation can help maintain the register	Taking chest voice higher / maintaining a speech quality through a higher range	Passaggio / Register Transition	Movement-Based	Visual/Kinaesthetic	This spatial mapping system provides students with a proprioceptive guide for resonance placement that correlates with registers. While scientifically we know that vocal fold vibration occurs at the larynx regardless of pitch, the resonance strategy (which harmonics are amplified through vocal tract shaping) does change with pitch.
“One of my favourites from Herbert-Cesare in the Voice of the Mind, he talks about being above the note for high notes you’re mentally above the note and you’re placing it down rather than being below and pressing up and I think that allows the student to tune into a more of a second resonance second form and tuning rather than trying to push the the first resonance up which is going to hit a wall and so it’s it’s cues like this you know just touching the note ather than you know jamming up so there’s there’s all different ways of leading”	Reduction in effort when imagining going over the note rather than pushing up to it. Changes resonance tuning.	Vocal Tone	Spatial Mapping	Kinaesthetic	Herbert-Caesari’s posits that there is a ‘sensation map’ for specific pitch through the head and throat that can assist the singer in imagining where the note is positioned and placing the intention of the above it.
“This is your lane, but you need to go off the main path” (encouraging exploration)	Improvisation and exploration particularly in jazz	Musicality / Artistic Expression	Spatial Mapping	Kinaesthetic	Perhaps like the technique of pitch centering, the singer has a fixed point mentally, from where they can explore and return safely. The psychological safety of the fixed path perhaps providing security
“The Caffetiere” Pushing down on the plunger of the cafetière and that’s a way that people can understand something that’s very complex and internal like diaphragmatic function, in a way that is more tangible for them because they’ve already pushed down on a French press at some point.	An analogy for how the breathing and support mechanism can be likened to the plunging motion of the cafetière.	Breath Support	Spatial Mapping	Kinaesthetic	Reduces cognitive load be suggesting there mental correlation between the pressure exerted on the plunging motion activating abdominals and putting pressure in the abdomen, and pulling up to release the plunger is similar in nature to activating breath support
"How deep do you think the pyramid's foundations go?" Relating foundation depth to building height, emphasising that high notes require deep support.	Improved stability / support	Breath Support	Spatial Mapping	Kinaesthetic	Relatable image that allows students to map a shape to to the notion of
Flying a plane, analogy for sustaining support to the end of the phrase or “to the end of the runway”	Singer maintains support until the phrase ends, distinguishing between "holding" (gripping) and "supporting" smooth flow like the aeroplane.	Breath Support	Kinaesthetic	Kinaesthetic	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
Imagining two hands across the front of the belly shaking Lower abdominal muscles meeting and connecting for support.	Identifying the sensation of active core	Breath Control	Visual Metaphor	Kinaesthetic	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
Using arms to imagine pushing a beach ball under the water. The higher the pitch the more pressure you need to push the beach ball deeper.	Sense of appropriate levels of support to match difficulty of task while removing instinct to reach up for notes	Breath Control	Movement-Based	Kinaesthetic	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
Imagine doing a lap pull down in the gym while doing a swoop or a portamento,	Increased stability	Breath Support	Movement-Based	Kinaesthetic	Anchoring of shoulders and back to support demands of phrase
Visual technology as imagery using spectrographic analysis as visual biofeedback for example, Estill Voice Print Analysis.	Tonal balance	Harmonic Resonance	Visual Biofeedback	Visual/Kinaesthetic	Represents a different modality of imagery, external visual representation rather than metaphorical thinking, provides objective feedback that complements subjective Kinaesthetic awareness. Bridges the gap between internal sensation and external acoustic reality

But to make it simpler, I went for the triangle which has um, components like opening up to the emotions and the experiences that you're having in the moment without trying to push them away or make anything go away. And also separating yourself from thought the thoughts that you're having, which may not or may not reflect the reality.					Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
"One of the things that I often use is we have to have enough energy in the front of the tongue to balance what's happening in the back. The back is working. It is engaging. It's doing it's shaping the vocal tract. It's doing things and so those muscles are active in the back third of the tongue. If we do not have some energy in the front of the tongue it's a little bit like the game of tug of war, but it's like you only have team members on one side. When people perceive that there is tongue tension it's because the back side of the rope is winning the competition and we don't have enough energy in the front to balance things and so it ends up creating problems and the solution is not to relax everything"	Tongue tension release through awareness of the necessity for balance of 'good' tension between front and back third of tongue	Tongue Tension Release	Movement-Based	Kinaesthetic	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
Imagery for Performance Psychology for grounding and stability: "Roots coming from your feet going through into the ground"	Stability	Breath Support	Spatial	Kinaesthetic/Proprioceptive	This theme demonstrates that imagery serves not only technical/ functional purposes but also psychological and emotional dimensions of singing, addressing whole-person development rather than purely mechanical vocal production.
I have them sometimes walk around the room so that they're not like tense.			Movement-Based		Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
using speech patterns to establish natural, tension-free production.					Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
It's so sort of, it's not even metaphorical language, it's just ideas that you can bring to create this other world in which the singer can put themselves to start experiencing something a bit different for um performance anxiety.					Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
Hand gestures showing spatial direction in melody like little flicks/ apostrophes for grace notes and head tilts to indicate interval skips	Assists in learning melody through movement/ gesture association	Melody Acquisition	Gestural	Kinaesthetic	Research on hand gestures during singing have been shown to support motor learning (Madill, 2025)
Michael Chekhov's Psychological gestures: a framework connecting imagination to physical expression. Mostly undertaken through guided imagination, however there are some abstract drawings that convey feeling and energy	Develops character and storytelling by building through structured exercises	Performance	Movement-Based	Visual/Kinaesthetic	Chekhov's Psychological Gestures used widely in training actors.
Painter's Palette Metaphor which conceptualises vocal timbre as a mix of colours that can be adjusted. "Think of it like a painter's palette. You would be looking at greens and reds and yellows and blues. If I want to make something a little bit darker or less twangy. maybe I need to add a little bit more purple to it"	Helpful for modifying twang levels, providing agency and control for the student to "add" or "subtract" colours	Vocal Tone	Linguistic Metaphor	Visual/Kinaesthetic	Creates a continuous spectrum rather than binary choices, allowing for nuanced adjustments
Vowels are linked to colors (oo/oh = purple = darker)					Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.
"Whingy witch" / "Complain ing cat" Twangy, focused sound Global laryngeal tilt	Increasing twangy deliver or reducing airy tone	Vocal Tone	Linguistic Metaphor	Kinaesthetic	Using familiar ssociative sounds to create changes in vocal tract. Reduces cognitive load
"Voiceover voice" / "Marks & Spencer voice" / "Joanna Lumley voice" for specific jazz tonal qualities	Exploratory device for finding the target tone	Vocal Tone	Linguistic Metaphor	Auditory/Visual	Empirically validated through pedagogical practice (EBVP); specific mechanism warrants further investigation.

MODALITY DEFINITIONS
Modality
Visual
Auditory
Kinaesthetic
Kinaesthetic/Proprioceptive
Visual/Kinaesthetic
Auditory/Kinaesthetic
Multimodal
IMAGERY TYPE DEFINITIONS
Imagery Type
Linguistic Metaphor
Acoustic Metaphor
Audiation
Auditory Modelling
Auditory Imagery
Spatial Mapping
Gestural
Movement-Based
Visual Biofeedback
Visual Metaphor
Visual/Imitation
ABBREVIATIONS
EBVP

Definition
Images involving sight, spatial relationships, colours, shapes. Processed primarily through visual cognitive pathways.
Images involving sounds, tones, qualities of sound. Engaged through auditory processing and audiation.
Images involving body sensation, movement, physical feeling. Engages proprioceptive and somatic awareness.
Combines body sensation with internal awareness of body position and movement in space.
Multimodal imagery combining visual representation with physical/embodied experience.
Multimodal imagery combining auditory input with physical sensation and body awareness.
Combines three or more modalities (visual, auditory, kinaesthetic) simultaneously.
Definition
Figurative language using comparison to communicate sensation or action (e.g., "whimpering puppy").
Metaphors specifically relating to sound qualities or tonal characteristics.
Mental hearing of music; internal representation of sound without external stimulus (Gordon, 1999).
Using recorded or live exemplars to establish target sound through listening.
Mental representation of sounds, including timbral qualities and musical patterns.
Assigning spatial/directional properties to abstract concepts like pitch, resonance, or phrase direction.
Hand or body gestures used as prompts or representations of vocal concepts.
Whole-body movement or kinetic activity to embody or facilitate vocal production.
Technology-assisted visual representation of acoustic phenomena (e.g., spectrograms).
Imagery using visual concepts to represent non-visual phenomena.
Observational learning through watching and replicating demonstrated behaviours.
Evidence-Based Voice Pedagogy - approach recognising that "what works" in practice constitutes valid evidence.

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

Appendix B

PG2 / E1 FORM

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:		Tanya Holt			
2	Tick all boxes that apply:		Member of staff:	☐	Honorary research fellow:	☐
	Undergraduate Student	☐	Taught Postgraduate Student	x	Postgraduate Research Student	☐

3	Institute/Academic Discipline/Centre:	WAPPAR
4	Campus:	Carmarthen
5	E-mail address:	tanya@tanyaholt.co.uk
6	Contact Telephone Number:	07949 443118
	For students:	
7	Student Number:	2246139
8	Programme of Study:	MA 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:	The Silent Singer - Developing Imagery Strategies for Training Singers		
2	Proposed start date:	14th July 2025	Proposed end date:	2nd March 2026
	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:** • *Purpose of Research Activity* • *Proposed Research Question* • *Aims of Research Activity* • *Objectives of Research Activity* Demonstrate, briefly, how **<u>Existing Research</u>** has informed the proposed activity and explain • *What the research activity will add to the body of knowledge* • *How it addresses an area of importance.*			
3	**Purpose of Research Activity** The purpose of this paper is to refine and build on previous research (modules 4 and 5) to develop a practical handbook for use by singing teachers to support and implement the use of imagery in singing training. Published academic, pedagogical and clinical research presents evidence to support the efficacy of using imagery in resolving problems, improving motor learning outcomes and developing self-confidence. As there is a predominance of research in elite sports, and very few studies examining imagery-use in the context of singing training, this practical study intends to find transferability from sports studies. This will be undertaken by reaching out to the wider community of singing teachers and singers to illicit individual performance and studio-based imagery strategies or experiences. These findings will be collated, along with a suggested visualisation protocol, into a digital handbook called the Silent Singer. This 'almanac' of first-hand experiences of image-use for specific technical, artistic and emotional elements of singing and performance will serve to illustrate, inspire and encourage the use of imagery for teachers and students alike. Furthermore, this project may go some way to furnishing the archives with singing-specific, in-use examples. (this box should expand as you type)			

4	**Research Question** To assess the benefits of a practical application of imagery-use strategies for skill enhancement and problem-solving in singing training. (this box should expand as you type)
5	**Aims of Research Activity** To develop a better understanding of the relationship between imagery use and problem solving in singing training. Specifically, to find transferability from elite sports studies along with examples of practical implementation by the wider community of singing teachers. The ultimate aim being to to fully develop a teacher's imagery handbook. (this box should expand as you type)
6	**Objectives of Research Activity** The first phase of this research, completed in Module 5, was the development of a prototype for a singing teachers' imagery handbook called the Silent Singer. This prototype is now to be tested with the wider singing and teaching community, with the feedback being collated into a final iteration of the handbook. This will be undertaken using on-line questionnaires with some follow-up interviews followed by an exploration of themes through coding. The ultimate objective being to provide the end-user with foundational knowledge in imagery-use for skill development and performance enhancement along with a database of contributed examples of imagery-use for specific problem solving in the singing studio.(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	A qualitative study encompassing the following methods, presented in chronological order: 1) **Literature review**: To examine clinical, academic and pedagogical literature to extract specific examples of imagery use in physical training that can be included in the artefact 2) **Research of Participant selection strategies** As the final iteration of the Silent Singer is dependent on testing and on contributions from singing teachers, forums, membership associations such as British Voice Foundation or the Musicians Union and conservatoires will be explored 3) **The creation of a web portal** landing page to enable the downloading of the prototype to be tested and the uploading of contributions or feedback. 4) The creation of an online digital **questionnaire** for feedback specifically on the efficacy of the use and the content of the artefact 5) The creation of a second online digital **questionnaire** that is structured around existing questionnaires used in studies on imagery-use in sports, dance and singing. the questionnaire intends to capture emerging patterns and themes and personal experiences and will be included in the artefact itself 6) **Interviews**; There may be value in conducting interviews with a small number of teachers and contributors, to provide a deeper qualitative understanding of the ways in which imagery is used. These interviews will take place online and will be recorded and transcribed. 7) The analysis of the collected data will be subject to a hybrid of **deductive and inductive coding.** As a principle aim of the final handbook is to enable the end-user to cross reference problems with solutions, axial or thematic coding will be implemented which will reduce the data-sets to manageable segments. Depending on the number of respondents, the use of Qualitative Data Analysis Software (QDAS) will be useful in identifying the relationship between codes and key themes and is likely to be a useful part of the methods of data analysis. 8) Alongside the academic explorations of this paper, will be the creation of the **final artefact; a digital teacher's handbook called the Silent Singer.** This will be presented as a 'friendly', non-academic in tone with a playful aesthetic and will be available by request (this box should expand as you type)
	Location of research activity Identify all locations where research activity will take place.
8	27 Trafalgar Grove, London SE10 9TB (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	*(this box should expand as you type)*

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. *(this box should expand as you type)*		

	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:		

	(this box should expand as you type)

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?	20 - 30 *(this box should expand as you type)*
11	Who will the participants be?	Singing teachers, singers *(this box should expand as you type)*
12	How will you identify the participants?	Through Musician's Union, British Voice Association, Social media teaching groups, conservatoires and colleges *(this box should expand as you type)*

	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			
	(this box should expand as you type)			

	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			
	#25 Specialist equipment - online interviews will be conducted through Zoom using my personal desktop Apple iMac computer. *(this box should expand as you type)*			

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: 1. Imagery-use can be clinically disruptive to people living with certain conditions such as Schizophrenia or PTSD and as such, these individuals should not use imagery interventions unless supervised by a clinically qualified therapist. 2. That participants might be concerned that they could be identified *(this box should expand as you type)*	*How you will mitigate the risk to participants:* 1. All participants and singing teachers will receive information about the negative potential of using imagery under these circumstances. The design of the document is careful to bring prominence to this. 2. Online questionnaires are submitted anonymously. The terms of the agreement between the researcher and the participant are clearly stated before the questionnaire can be completed. These terms include a guarantee of anonymity. For participants being interviewed, any names will be replaced by a number sequence and consent-form signatures will be redacted when sent to the university for the final marking. *(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	
	(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: 1. In the event that the research be published and placed in the public domain, that the participant might feel there is a breach of their copyright 2. There is a risk that I cannot persuade enough individuals to participate in the research resulting in insufficient data collection or voiding this aspect of the research altogether. 3. That a teacher implements an imagery strategy with a student who is clinical unsuitable for such an intervention 4. As the principle researcher, my name will be publicly connected to this research, there is therefore a risk of personal criticism and reputational damage. *(this box should expand as you type)*	*How you will mitigate the risk to the investigator:* 1. The questionnaires will address this by full transparency that the author hopes that the research will be made available for open use. That by submitting the form, the participant agrees to the terms presented in the form. 2. In the event that not enough data is collected to provide meaning to the results, the research will be limited to existing examples of imagery use and transferability to singing training 3. The risk associated with using imagery with individuals suffering from conditions such as Schizophrenia or PTSD are highlighted and explained clearly in the “Things to consider before using imagery” section of the artefact which is included with the questionnaires 4. To reduce the risk to repetitional damage I will ensure that the quality and integrity of the research activity is as robust as possible. As imagery per se is subjective and, I must expect that not all readers will agree with the some of the content. *(this box should expand as you type)*
5	**University/institutional risks** For example: adverse publicity, financial loss, data protection	

	Risk to the University: 1. When undertaking this research, I am acting as a member of the University, therefore any perceived lack of professionalism may damage the reputation of the university. 2. Potential claims of negligence could be made against the university, for poorly conducted research undertaken by research students. The university has taken steps to minimise the risks to its reputation by the provision of an ethics code of practice which aims to govern all insider researcher investigations. Any breach of these, puts the university at risk *(this box should expand as you type)*	*How you will mitigate the risk to the University:* 1. Professionalism includes being well organised and well prepared in addition to clarity and honesty in all my dealings relating to this research. Upholding high standards in the manner in which the research is undertaken and in the integrity of the research data itself, are vital in this regard. 2. To minimise the potential for claims of negligence, I will comply with the ethical, legal and professional frameworks, obligations and standards as required by statutory and regulatory authorities, as well as the university's Research Integrity and Ethics Code of Practice. I have read and understand the behaviours that constitute misconduct; these include fabrication, falsification, plagiarism, failure to meet ethical, legal and professional obligations and improper dealing with allegations of misconduct, all constitute malfeasance and are therefore regarded as misconduct. *(this box should expand as you type)*
6	**Environmental risks** For example: accidental spillage of pollutants, damage to local ecosystems	
	Risk to the environment: The research does not present any significant foreseeable environmental risks *(this box should expand as you type)*	*How you will mitigate the risk to environment:* There will be no printing, no travelling and minimal electricity usage. *(this box should expand as you type)*

	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.			

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?
	The bulk of the research is centred on anonymous participation through questionnaires. The questionnaire will present an option to submit an email address in the event that the participant would like to receive a final report at the conclusion of the research period. Participants preferring an online interview they will also be offered the opportunity to submit their email address for the same purpose. *(this box should expand as you type)*
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.
	The data collected for this research is solicited through the dissemination of the Silent Singer digital handbook and the questionnaire is an integral part of this artefact. The handbook includes examples of the sorts of data being solicited and how this data will be presented in the final iteration of the handbook. This insight should allow any contributor to fully understand the implications of their participation and how their contributions will appear. Full disclosure will be presented BEFORE completing the questionnaires in order to give the participant time to reflect on whether they wish to continue or to withdraw. In the event of online interviews, the participant will receive the same information, however, in these cases each will receive a consent form to sign, which will be securely stored until the completion of the research. All consent forms will obtain approval from the supervising tutor before use. *(this box should expand as you type)*
3	**Confidentiality / Anonymity** Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case.

	This research is being undertaken predominantly through anonymous on-line contributions. In all events of data collection, online or by interview, no participant names or identities will be included in any of the research data. Consent forms for online interviews will be redacted for inclusion in the appendix of the final assignment submission to UWTSD. While the data is being processed by the researcher, forms will be stored on a desktop password-protected, personal computer that is locked away when not being used and can only be accessed by the principal researcher. Additionally, this information is stored on an encrypted iCloud account. *(this box should expand as you type)*

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.*	☒	☐
	If YES, provide a description of the data and explain why this data needs to be collected:		
2	Digital interviews will be conducted through Zoom. The Zoom platform requires consent by both parties before audio recordings can be created. In the event that the participant agrees to an audio recording of the interview to enable post-interview transcriptions, these will be downloaded to the dedicated hard drive and uploaded to the Cloud until the research has been marked by UWTSD. *(this box should expand as you type)*		
	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),*	☐	☒
	If YES, provide a description of the special category data and explain why this data needs to be collected:		

4	*(this box should expand as you type)*

	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:		
	While the data is being processed by the researcher, it will be stored on a desktop password-protected, personal computer that is locked away when not being used and can only be accessed by the principal researcher. Data will be backed up and stored on an encrypted and password protected external hard drive that is stored in a different location to the computer and not accessible to anyone other than the principal researcher. Once the research has been marked and graded, the data will be destroyed by erasing the external hard drive and deleting any related files from the computer, thereby eliminating any chance of identifying the participants. *(this box should expand as you type)*		

	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):		
	It will be necessary to share data with the presiding tutor at the Voice Study Centre as part of the evaluation and tutoring process. All data transfers will be encrypted and password protected. An external hard drive used to store data will be password protected. In accordance with the DPA2018, interviewees will have the right to ask to see what data is held relating to them and they will be able to communicate with me about the logistical and overall nature of the research through my work email address. My email is password protected and can be accessed through the desktop and through my mobile phone. *(this box should expand as you type)*		
22	List all who will have access to the data generated by the research activity:		
	The principal researcher Any interviewee that wishes to see what data is held relating to them. The presiding research supervisor Any other requesting member of staff at the Voice Study Centre or UWTSD. *(this box should expand as you type)*		
23	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	The principal researcher - Tanya Holt *(this box should expand as you type)*		
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 a password protected external hard drive that 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. *(this box should expand as you type)*		

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. (*Most relevant to academic staff)*		
	(this box should expand as you type)		
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:**	Tanya Holt	Date: 9th June 2025

For STUDENT Submissions:

2	Director of Studies/Supervisor:	Joshua Lee-Cummins Laura James	**Date:** 9.7.25
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.

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 C: Examples of coding and data analysis

Imagery in vocal ped - codes

Order of C	Code Name	Number of Snippets	Code URL
1	Cognitive	1	https://app.delvetool.com/projects/40718/codes/1447309
2	democratising learning	4	https://app.delvetool.com/projects/40718/codes/1440874
3	Individuals summary	22	https://app.delvetool.com/projects/40718/codes/1440734
4	Translational Tool	2	https://app.delvetool.com/projects/40718/codes/1440688
5	Person Centred	2	https://app.delvetool.com/projects/40718/codes/1440668
6	technology in learning	6	https://app.delvetool.com/projects/40718/codes/1440662
7	What never works	1	https://app.delvetool.com/projects/40718/codes/1440563
8	Teaching frameworks	87	https://app.delvetool.com/projects/40718/codes/1440561
9	Music Genre	17	https://app.delvetool.com/projects/40718/codes/1440063
10	Anti-imagery	2	https://app.delvetool.com/projects/40718/codes/1440058
11	Specific reference to imagery use	4	https://app.delvetool.com/projects/40718/codes/1440057
12	Notable Quotes	35	https://app.delvetool.com/projects/40718/codes/1440056
13	Stories	20	https://app.delvetool.com/projects/40718/codes/1440049
14	Interviewee background	43	https://app.delvetool.com/projects/40718/codes/1440048
15	Practical Startegies	50	https://app.delvetool.com/projects/40718/codes/1440043
16	Learning melody	2	https://app.delvetool.com/projects/40718/codes/1441784
17	Airflow	1	https://app.delvetool.com/projects/40718/codes/1441782
18	Postural	1	https://app.delvetool.com/projects/40718/codes/1441781
19	Colours	5	https://app.delvetool.com/projects/40718/codes/1440919
20	Vocal tone	7	https://app.delvetool.com/projects/40718/codes/1440945
21	Support	15	https://app.delvetool.com/projects/40718/codes/1440882
22	Tension release	4	https://app.delvetool.com/projects/40718/codes/1440857
23	mental imagery	5	https://app.delvetool.com/projects/40718/codes/1440615
24	spatial imagery	16	https://app.delvetool.com/projects/40718/codes/1440599
25	Motor learning	1	https://app.delvetool.com/projects/40718/codes/1440567
26	Tension	4	https://app.delvetool.com/projects/40718/codes/1440565
27	gestures	4	https://app.delvetool.com/projects/40718/codes/1440564
28	Movement	7	https://app.delvetool.com/projects/40718/codes/1440562
29	Copying or mimicking	8	https://app.delvetool.com/projects/40718/codes/1440064
30	Metaphorical/Linguistic	17	https://app.delvetool.com/projects/40718/codes/1440047
31	Kinaesthetic Imagery	21	https://app.delvetool.com/projects/40718/codes/1440046
32	Auditory Imagery	8	https://app.delvetool.com/projects/40718/codes/1440045
33	Visual Imagery	16	https://app.delvetool.com/projects/40718/codes/1440044
34	Professional Standing	19	https://app.delvetool.com/projects/40718/codes/1440042
35	Scientific Influences	31	https://app.delvetool.com/projects/40718/codes/1440041
36	Specific influences	21	https://app.delvetool.com/projects/40718/codes/1440054
37	Teaching philosophy	65	https://app.delvetool.com/projects/40718/codes/1440040

2. 6th November Jeremy Mossman Interview .pdf

AI Share

Transcript

Complete Interview Transcription

The following is a complete transcription of the interview with Jeremy Ryan Mossman. The transcription captures the conversational nature of the interview, including natural speech patterns and organic dialogue flow.

Okay, so it might be recording the video, but you have my word that I will get rid of the video and we are just, okay, okay. Okay, thank you. I'm at the beginning of my journey of interviewing people, so thank you for bearing with me. So just the things that these are the sort of rather boring things, but I'm going to go through them for demographics. So how long have you been teaching roughly? How long are I now? 20 years. Okay, all right. And where do you primarily teach? So things like private studio, conservatour school, or isn't it all over the place? It's all private. I used to be a professor for 15 years. I was working in academia and since 2021 I've been in private practice only. Fantastic. Thank you. What do you teach mostly in terms of style or genre? Mostly musical theater. Okay. Good. And then my final question is, obviously, I'm asking you to contribute what could be construed as your intellectual property by just sharing your ideas with me. Would you like to be credited for any ideas that are included in my paper in any way? I don't know. Let's see what comes up. And I'll tell you. Okay. Okay. All right. Super. Okay. So the main gesture of the of the paper is obviously that I want to try and fill this deficit of information which is asking singing teachers what kind of things they do in terms of strategies using any sort of imagery at all. So I don't know if you've had a chance to think about it, but do you have anything at all that you might like to provide as an exam? Yeah. I think we can think of imagery in a couple different ways. I think probably the most obvious one are images that would motivate the body to organize the voice differently. And there are lots of kinds of images that voice teachers use, you know, like a imagining a balloon on your head that's floating up higher, which is going to influence your spinal alignment, maybe influence your soft palate, influence your tongue, the lot can be influenced by this idea of there's a balloon on your head. That's sort of a common image I remember from like very early voice lessons in my life.

Professional Standing | Specific reference to imagery use

12/8/25, 4:03 PM Interview Summary: Jeremy Ryan Mossman

9

And that kind of imagery can be very, very useful for some learners. I don't tend to lean on images like that. If anything, I encourage my students to develop their own images. You know, I think something shifting in your voice, you know, I asked them to articulate what it was like. And they'll tell me that it was like there was a balloon floating up or it felt like their soft palate was more domed or it felt like there was a roundness in their mouth, which is an image. Yes. All of that is image- based, right? Yes. So, so I don't tend to have images that I give to singers to help a visit a change. I'm more movement-based and encourage them to create their own images because the images often filled with the technique and the minutia of the strategy that's held together by something as simple as this a balloon floating up connected to your head. Like that takes care of so much stuff. If it means something to somebody, yeah. My God. Work for everybody though. Of course not. No. So I'm not going to say you're using your hands a lot Jeremy. So in terms of your teaching, do you suggest your user? I think you said, well, you didn't name a still as your previous model, but I think you have been a still trained as that correct. I was a master teacher of the Estle model for about 10 years. I've left that behind for lots of reasons that probably aren't very relevant, but it is a model I have a strong appreciation for and I always say Estle is in my ears, but never on my tongue. Okay. Okay. I'm very helpful for analyzing what I'm hearing. That was very helpful. And some of the prompts, I think are helpful. Yes. But it's just not the holistic perspective that I put out there. Yes. I'm looking to escape mechanics and that is a model of mechanics. So I'm looking to see the body in its fullness and it's functional unification versus functional isolation, which isn't really the best. I love that. I like that. So yeah. So there's use there. There's hidden brilliance in the model. And I think if Joe was alive today, it would be taught really differently. And there would be different focuses. But that's not there here, nor there, when it comes to imagery. No, it was just really. My interest was just, I'm a person that uses my hands a lot. And I find myself just doing that. Yes. Unless it's an obvious change, normally in terms of tonal quality or in brightness, I'm often doing that. So just really, I was just curious to see whether you notice yourself doing those kinds of things just to you. Yeah. And I actually sort of have a little theory not knowing how the hand actions were developed in Estol, that they happened organically. That it's a very natural thing that we do to make sense of our internal experience by using our hands in certain ways. It probably, if you talk somebody, how to retract their false vocal folds, for instance, if you went down that

Scientific Influences | Specific reference to imagery use

Codes

Search or Add Codes

- Cognitive (1)
- democratising learning (4)
- Individuals summary (22)
- Translational Tool (2)
- Person Centred (2)
- technology in learning (6)
- What never works (1)
- Teaching frameworks (87)
- Music Genre (17)
- Anti-imagery (2)
- Specific reference to im… (4)
- Notable Quotes (35)
- Stories (20)
- Interviewee background (43)
- Practical Startegies (50)
  - Learning melody (2)
  - Airflow (1)
  - Postural (1)
  - Colours (5)
  - Vocal tone (7)
  - Support (15)
  - Tension release (4)
  - mental imagery (5)
  - spatial imagery (16)

Transcript

TH

Yes.

IH

Right? And so the the parts of that oscillation of air that are least involved in making it easy are the bright parts, because those are really rapid, generally low amplitude oscillations that peter out quickly because the vocal tract is so muffly as a resonator. It's the warmest parts of the sound that are these super high amplitude, high power, high energy oscillations that ring for a lot longer over time. And um, and but our ears are insensitive to the warm parts. So like, we hear the part of the sound that doesn't help us sing better, and we identify that as like, "That's good singing." It's harder to notice the parts of the sound that actually help us sing better. Um, and so there's this, it's, it's an underlying paradox at the intersection of voice production and perception. And so like getting people to understand that there is plenty of brightness in the setup that also gets them the warmth that they didn't know notice the first time, like that will be a situation where we might refine what a singer is understanding of what brightness is. But again, in my mind, that comes back to the tonal target. That's like, are are you willing to let go of the ill-conceived brightness so that we can establish stability to then get easily gotten brightness on the other side of it.

Notable Quotes

[26:02]

TH

And do you find yourself being quite playful with your students, particularly the avocational ones, just asking them to experiment with different, um, tonal, uh, qualities?

IH

Yeah, it's always so hard to know this. I I just gave a, um, a masterclass in Boston and I found myself saying like, you know, the most com— to teachers — "The most common challenges you'll get will be this and this and this." But then I was like, but it's also possible that that's just the student body that I attract, right? Like that those are the people that come to me, is the people who have these issues. Um, and so it's it's a little hard to know about the playful thing. It is absolutely exploratory in nature. Um, I do not, when I lecture, I try to be edutaining. You know, like...

TH

I'm nicking that. I'm nicking that.

IH

Yeah, it's, it's, it's a great... I do that. Um, but edutainment is really important to me these days. Um, when I teach, I'm serious, and and it's like it's a, it is a process that I want people to, because the quietness that needs to exist in the singer's brain for them to be able to directly intend the thing they want to do. Like even something as uncomplicated as like, *[breathes, then sings a short, sharp "ha"]*, *[breathes, then sings a short, sharp "ha"]*, *[breathes, then sings a short, sharp "ha"]*. Like even something as simple as that, like just breathe in, think the sound, go. Breathe in, think the sound, go. Like that's a challenge for most people. They'll do three additional things, which will not stop them from being 85% of what they want, but will definitely stop the last 15%. And so I I would never turn a voice lesson, I I don't think a voice lesson should be joyless, but I don't necessarily want to appeal to someone's sense that they're feeling good regardless of whether they're improving. And again, it might just be the population that comes to me are the people that want to be serious like that. Um, but I tend to find the worst thing that one could do is like prescribe an exercise and like run them through it. And they do it with a compromised function, and you change nothing, and then you say, "Good job" and move on. Like I I think that's a waste of the person's money. It might be my population. But I think that's...

Practical Startegies

TH

Yes. Well, I think, I think anyone would actually agree, anyone who's, who's in their right mind would agree with definitely with that statement.

IH

Codes

Search or Add Codes

- Postural (1)
- Colours (5)
- Vocal tone (7)
- Support (15)
- Tension release (4)
- mental imagery (5)
- spatial imagery (16)
- Motor learning (1)
- Tension (4)
- gestures (4)
- Movement (7)
- Copying or mimicking (8)
- Metaphorical/Linguistic (17)
- Kinaesthetic Imagery (21)
- Auditory Imagery (8)
- Visual Imagery (16)
- Professional Standing (19)
- Scientific Influences (31)
  - Specific influences (21)
- Teaching philosophy (65)

Transcript

towards teaching experiences.

TK
Okay.

[02:00]

TH
So you, um, one of the, your areas of specialty, as far as I understand, is uh, in teaching vocalese, particularly, if we put it, if we bring it back to the jazz rather than any, uh... Yeah, specifically. Um, if we could just talk about, um, how one goes about teaching vocalese and what kind of things do you ask your students to possibly imagine or how do you get them started with, um, with such a thing?

TK
Well, I think, um, I suppose it's good to talk about improvisation as a bigger, as a bigger subject, because I think that's good across the board for any style of singing. Um, because I think there's a lot of freedom with it. Um, you can use, I suppose, imagery just with improvisation, you do use quite often different prompts because that will give a different, um, response. So, you know, you can say, "Imagine you're..." I don't know, for improvising, "singing in the clouds," or, um, you know, you're, um, you know, you might be looking for something specific, you know, um, rhythmically, so you might ask for, you know, so if you're working, you know, "I want it in walking pace," or if you're doing a, some swung phrases, you might, you might also get students to move their bodies or their hands, you know, in a swing feel, for example. Um...

Practical Startegies

[04:00]

12/27/25, 6:04 PM Interview Transcription and Analysis: Trudy Kerr

file
///home/ubuntu/interview_analysis.html 6/28

TK
...I didn't write a book, I just put together a show of, um, like a live show, an hour-long show, and I went around to schools and different jazz festivals. It was a nice fit for a family festival. Um, so we sort of took a lot of jazz repertoire and I put a lot of either movement or dance, or, you know, clapping or rhythms to the songs...

Movement

TH
Yes. So was there bouncing a ball or something? I've done a bit of research.

TK
Oh, no, we didn't do that. But we... a lot of call and response, you know, singing da da da da, singing phrases back. A lot of that, um, a lot of, you know, uh, jazz hands. "Yeah." That sort of thing. So, um... what did we do? Just trying to remember now, it's a while ago. Um, things like, um, when we did, "It don't mean a thing if it ain't got that swing." And they have to sing all the doo-wah, doo- wah, doo-wah, doo-wah, doo-wah, doo-wahs. So, sort of getting them feeling, feeling the swing feel. Um...

TH
Sure. And...

TK
Yeah.

Codes

Search or Add Codes

- Postural (1)
- Colours (5)
- Vocal tone (7)
- Support (15)
- Tension release (4)
- mental imagery (5)
- spatial imagery (16)
- Motor learning (1)
- Tension (4)
- gestures (4)
- Movement (7)
- Copying or mimicking (8)
- Metaphorical/Linguistic (17)
- Kinaesthetic Imagery (21)
- Auditory Imagery (8)
- Visual Imagery (16)
- Professional Standing (19)
- Scientific Influences (31)
- Specific influences (21)
- Teaching philosophy (65)

2026-01-12-Project-Snippets (2)

	Imagery quote	URL	Codes		
	reduced airflow “Whimpering puppy”	https://app.delv	Airflow		
	it sounds silvery or it sounds metallic.	https://app.delv	Auditory Imagery		
	e'll we'll listen to recordings a lot.	https://app.delv	Auditory Imagery	Copying or mimicking	
	o each of them have their own sounds along the way. And then this is their map. So it's like, okay, well, um, on the top, you're going to flip, you know, like Wl	https://app.delv	Auditory Imagery	Practical Startegies	
	The Alien as Acoustic Metaphor	https://app.delv	Auditory Imagery	Metaphorical/Linguistic	
	Trudy Kerr emphasizes the importance of audiation,	https://app.delv	Auditory Imagery		
	it's a lot of listening to the solo	https://app.delv	Auditory Imagery		
	It's to keep listening and then actually be able to hear it whilst you're not actually listening, but it's running around in your head.	https://app.delv	Auditory Imagery		
	TK: A wrapper is generally talk about flow is the rhythm and sort of where it, where it, where it's going	https://app.delv	Auditory Imagery	Practical Startegies	Visual Imagery
	Cognitive Science Basis: The system leverages spatial working memory and visual pattern recognition rather than re- quiring symbolic decoding (traditional r	https://app.delv	Cognitive	democratising learning	Learning melody
	o my approach is more like, how do you feel when it’s more silvery? How can we make it more silvery? Or how can we add, let’s say, uh, for one of my clients	https://app.delv	Colours		
	Yeah. And think of it like a painter’s palette. You would be looking at greens and reds and yellows and blues. If I want to make something a little bit darker or	https://app.delv	Colours		
	like the color wheel of sound spectrum	https://app.delv	Colours		
	“Roots coming from your feet going through into the ground” (physical grounding) - Visual body scan with color change (red to gold for tension release)	https://app.delv	Colours	Metaphorical/Linguistic	Support
	Tonal descriptors (bright, dark, cover) used when students' perceptual targets are misaligned	https://app.delv	Colours		
	learned how to sing from Mariah Carey and Whitney Houston,	https://app.delv	Copying or mimicking		
	Analysis: John’s use of celebrity performer examples serves multiple purposes: 1. Validates natural, intuitive movement 2. Demonstrates that great singing of	https://app.delv	Copying or mimicking		
	"Well, let's," you know, learn by copying someone. I might say, "Go, let's copy this. What does that..." I don't know, "what does that sound like to you?" You	https://app.delv	Copying or mimicking		
	I sort of say to them, "Try and find that in yourself, with your own sound."	https://app.delv	Copying or mimicking		
Participant name	I certainly play them some singers that maybe have that classical background.	https://app.delv	Copying or mimicking		
	a singer called Jane Monheit, who I really love, and she's, you can hear it's quite lyrical in how she sings, but she's a fantastic jazz singer.	https://app.delv	Copying or mimicking		
	Okay, well let's record it." And then I don't usually say anything. I just say, "Do you think you achieved it?" You know, I, I, I'm, I'm all for letting them critically	https://app.delv	Copying or mimicking		
	Analysis: This spatial mapping system provides students with a proprioceptive guide for resonance place- ment that correlates with registration changes. Wh	https://app.delv	democratising learning	spatial imagery	
	JB: Yeah I think I do a lot when I’m conducting when I’m working with choirs I think I do a lot less when I’m doing a singing lesson I used to do it all the time	https://app.delv	gestures		
	Translation of Scientific Knowledge: The interview explores the process of translating observations from laryngoscopy and MRI studies into practical teaching	https://app.delv	gestures	Teaching frameworks	Teaching philosophy
	In the motor acquisition stage some of that digactic what are you doing, how are you doing it, giving them words, vocabulary can be really helpful but when	https://app.delv	gestures	Motor learning	
	So again I'll loosen my hand to show that I've released the the position of sort of holding the the small cup or something I'll open my hand and widen it out. I	https://app.delv	gestures		
	SMS has over 45 years of teaching experience, predominantly in musical theatre, having taught at institutions including London Studio Centre, English Natio	https://app.delv	Interviewee background	Support	
	So like if I say, you know, “add more size” in chest voice	https://app.delv	Kinaesthetic Imagery		
	But I said, “All right, we’re going to get a buzz in our lips like—itchy teeth.” And she’s like, “Yeah, it’s uncomfortable. It’s itchy.” And I said, “Yeah, no, that’s g 8 teeth.” That’s what it means to me. So she said like, “Yeah, it is itchy.” But yeah, that’s like specific like chest voice sounds that like to me like are resonating	https://app.delv	Kinaesthetic Imagery		
	Natalie Weiss: Okay, so maybe I meant diagonal or unicorn or diver. So like if the sound is travel- ing up and you need to be like in a high belt kind of a situat	https://app.delv	Kinaesthetic Imagery	spatial imagery	
	- Walking around the room - Shaking the head - Squatting as notes go higher - Pulling taffy motion - Leaning forward (diver/unicorn) - Back circle movement	https://app.delv	Kinaesthetic Imagery		
	Analysis: The “weight” metaphor likely refers to multiple physical phenomena: - Excessive subglottic pressure (pushing too much air) - Extrinsic muscle tensi	https://app.delv	Kinaesthetic Imagery		
	Analysis: Tactile imagery works because singing is fundamentally embodied. The toothpaste tube metaphor is particularly effective because it provides: 1. Di	https://app.delv	Kinaesthetic Imagery		
	eah, I mean for diaphragm you can do, you know, the English or fingers like this now can you just go down like that. What do your elbows do? Okay, they go	https://app.delv	Kinaesthetic Imagery		
	like the Estill voice print. That’s the one I usually use with people. Many people do awesome with visual feedback like that.	https://app.delv	Kinaesthetic Imagery	Visual Imagery	
	tongue mapping	https://app.delv	Kinaesthetic Imagery		
	or some people describe the the tongue is like a little animal one one person once said oh it’s a bit like a toad when they’re when they’re just sitting before th	https://app.delv	Kinaesthetic Imagery	Metaphorical/Linguistic	
	For a low note, I say, think of a string puppet. Keep it nice and light. And they seem to work, that seems to work as well.	https://app.delv	Kinaesthetic Imagery		
	I also think I do a siren exercise and I say feel the sound swinging back and forwards, like a swing on the front porch of a western ranch house. So when you're sitting here alone, it	https://app.delv	Kinaesthetic Imagery	spatial imagery	
	“Riding a bike round in a circle” for legato	https://app.delv	Kinaesthetic Imagery	Metaphorical/Linguistic	Visual Imagery
	Core Principle: Certain words naturally place the vocal tract in optimal configurations due to the articulatory requirements of their consonants and vowels. By	https://app.delv	Kinaesthetic Imagery		
	1. Student identifies their goal (e.g., more chest voice in a mix) 2. Teacher identifies a word where the desired quality occurs naturally (e.g., "glad") 3. Student practices singing entire phrases on the magic word syllable 4. Student maintains the vocal "shape" while reintroducing actual lyrics This methodology extends beyond singing to Burke's work with speakers preparing TED Talks, where he identifies powerful phrases in early drafts to serve a	https://app.delv	Kinaesthetic Imagery		
	You have the Y axis which is there are things that move up and down. You have the X axis, which is your vocal folds, so you can have degrees of abduction t	https://app.delv	Kinaesthetic Imagery	Metaphorical/Linguistic	Visual Imagery
	nd he tells the other, and then he moves to New York and he marries Vivienne de Beauvoir. She's like, um, you know, she's a gold digger. And the, the FBI is	https://app.delv	Kinaesthetic Imagery	Metaphorical/Linguistic	Visual Imagery
	So, let me cut some of this. Okay. Oh, I can maybe open recent. Yeah, here we go. Okay. Yeah. This is the Twang Farm. So, I'll say there, this the Y-axis is yo	https://app.delv	Kinaesthetic Imagery	Metaphorical/Linguistic	Visual Imagery
	So for example, if an owl says "who," an H is an aspirate onset, it tends to infuse breathiness in the tone. TH: (14:21) Yeah, with the lower larynx. TB: (14:23) And an "oo," right, protrude your lips, lowers your larynx, so... (sings) whoo... is a good way to get into that place. Yeah?	https://app.delv	Kinaesthetic Imagery	Metaphorical/Linguistic	
	The Sheep: High larynx + constricted vocal tract + thicker folds = "Old school Broadway belt" The Cat: Mid larynx + AES narrowing + vertical thyroid cartilage = Contemporary musical theatre/pop sound The Owl: Low larynx + breathy phonation + aspirate onset = Classical head voice	https://app.delv	Kinaesthetic Imagery	Metaphorical/Linguistic	
	transposing in order to be able to feel it slightly differently in the body.	https://app.delv	Kinaesthetic Imagery		
	Jan uses imagery specifically to develop students’ internal sensory awareness: “Internal keyboard”: - Purpose: Help students locate pitch sensation internally - Particularly useful for students with pitching issues - Develops interoception (internal sensation a Significance: This theme connects to contemporary understanding of the importance of interoceptive awareness in skill acquisition and performance, sugges	https://app.delv	Learning melody	Teaching frameworks	
	[16:21] American football so his mental practice he actually came into the league he was amazing	https://app.delv	mental imagery		
	ure mental practice where you’re just imagining that you’re that you’re singing this whether it’s John Henny: [16:44] from you know behind your eyes or you can be the observer and then there is um silent practice John Henny: [16:51] where you now make all the adjustments the soft palate raises yes we we make adjustments in John Henny: [16:57] tongue throat jaw everything but we don’t phonate and these are great ways because as soon as we	https://app.delv	mental imagery		
	Analysis: Mental practice strategies serve multiple functions: 1. Skill acquisition without physical fatigue 2. Problem-solving for injured or limited voices 3. Ne	https://app.delv	mental imagery		
	There’s a lot of value to going through the im- age, the path of what you’re doing without actually doing anything. And so one area of the brain that we know	https://app.delv	mental imagery	Practical Startegies	
	TH: Yeah. Certainly in singing, mental practice and sub-vocalization features a lot in the literature. 6 AB: Yeah. And I absolutely swear by it, make my students do it on the bus.	https://app.delv	mental imagery		
	THEME 5: Weight Removal as Central Metaphor	https://app.delv	Metaphorical/Linguistic		
	[09:00] - Resonance and “Above the Note” Imagery	https://app.delv	Metaphorical/Linguistic		
	[11:00] - Toothpaste Tube Metaphor	https://app.delv	Metaphorical/Linguistic		
	was it was the idea of a toothpaste tube and it was to do with the it was to do basically with TH: [11:29] breath support but the idea of squeezing from the bottom not from the middle and I abso- lutely TH: [11:35] I absolutely loved that I thought that was that that really spoke to me that might be that I like	https://app.delv	Metaphorical/Linguistic		
	e, uh, think of this in a more broad way, think of it like shaped like a trumpet. And even colors,	https://app.delv	Metaphorical/Linguistic	Visual Imagery	
	So if I’m trying to get someone to understand the function of an external oblique contraction, a concentric con- traction, I will say, “Hey, just mime some bow	https://app.delv	Metaphorical/Linguistic	Movement	
	And for me, the difference between supporting control is when you're controlling, you're holding onto something. And when you're supporting, you're letting	https://app.delv	Metaphorical/Linguistic	Notable Quotes	
	- “Bubble” with flexible boundaries (student controls who is included) - “Mirrors around the outside” reflecting negativity away - “Golden beam of light” throu	https://app.delv	Metaphorical/Linguistic	spatial imagery	
	nd then I’ll have them add a squat. If the note’s going higher, I’ll have them bend their knees with them doing three things at once.	https://app.delv	Movement		
	Hands for High Notes (12:03)	https://app.delv	Movement		
	Example: Descending Riff or Melisma - Rhythmic precision: “basketball arm” - Support maintenance: “golden sound beam” horizontal - Head stability: avoiding “head wobble” - Physical connecti Significance: This holistic approach reflects the reality that singing is a complex, integrated activity requiring simultaneous attention to breath, phonation, res	https://app.delv	Movement	Music Genre	
	of either movement or dance, or, you know, clapping or rhythms to the songs...	https://app.delv	Movement		
	And they, you know, rappers, rapping, you never, um, you've never seen a rapper just stand there and rap. They don't do that. They move their bodies the wh	https://app.delv	Movement		
	I have always used, used my body.	https://app.delv	Movement		
	hat’s kind of the motion of like going up and back and then a rollercoaster going down or like you’re going on top of a hill and you’re coming down. It’s always like on a bridge, on a hill, on top of a mountain—something that’s like taking the weight out mostly.	https://app.delv	Notable Quotes	spatial imagery	
	- “Someone’s got you on a string” / “meat hook” for alignment - “Blowing up like a balloon” for breath	https://app.delv	Postural		
	what I’m saying is umbrella in the throat would be like lifting, lifting.	https://app.delv	spatial imagery		
	sitting on a shelf sort of a thing. It’s the notes coming out of nowhere, like you’re sitting on a shelf.	https://app.delv	spatial imagery		
	As opposed to reaching up for things	https://app.delv	spatial imagery		
	I usually have them add some kind of a fall to the call that I’m having them do because it takes out the weight in the sound. So let’s say I’m having them go like kind of early, but I’ll pick it 5 up: “Hey,” just kind of like a fall, right? So if I hear them sing and it sounds—“Hey”—some kind of like tightness, I’ll usually have them like put their hands up	https://app.delv	spatial imagery		

	ut you were talking about trying to get chest voice a little bit higher or that speaking quality a little bit higher. And according to his descriptor, you were doing	https://app.delv	spatial imagery		
	- “Sitting on a shelf” - “Going up and back, then forward” - “On a bridge, on a hill, on top of a mountain” - “Rollercoaster going down” - “Above your head lik	https://app.delv	spatial imagery		
	John Henny: [09:23] one of my favorites I think I get this from Herbert Cesare or Cesare voice to the mind is he talks John Henny: [09:33] about being above the note for high notes you’re mentally above the note and you’re placing it John Henny: [09:39] down rather than being below and pressing up and I think that allows the student to tune into John Henny: [09:48] a more of a second resonance second form and tuning rather than trying to push the the first John Henny: [09:56] resonance up which is going to hit a wall and so it’s it’s cues like this you know just touching the John Henny: [10:03] note ah rather than you know jamming up so there’s there’s all different ways of leading	https://app.delv	spatial imagery	Specific influences	
	“Being above the note” (09:33)	https://app.delv	spatial imagery		
	“Golden sound beam” Sustained horizontal sound Prevent vocal collapse	https://app.delv	spatial imagery	Vocal tone	
	- “This is your lane, but you need to go off the main path” (encouraging exploration)	https://app.delv	spatial imagery		
	o an example would be diaphragmatic function. So if you think, okay, so on an inhale, my diaphragm, my central 3 tendon is going down, my intrathoracic pressure is decreasing, my intra-abdominal pressure is going to increase as I inhale. So could I use an analogy for tha	https://app.delv	Support		
	Example: Fingers/Elbows for Rib and Diaphragm Function Description: “Put your fingers like this now can you just go down like that. What do your elbows d Analysis: - Creates immediate proprioceptive feedback - Uses accessible body parts (arms) to model less accessible areas (ribs) - The geometric relationship (downwa	https://app.delv	Support		
	"How deep do you think the pyramid's foundations go?" - relating foundation depth to building height, emphasizing that high notes require deep support.	https://app.delv	Support		
	AIRPLANE ANALOGY: "When does a pilot switch off the engine? When it's parked" - teaching students to maintain support until the phrase ends, distinguish	https://app.delv	Support		
	KNEADING PASTRY / SHAKING HANDS IN THE BELLY: Lower abdominal muscles meeting and connecting for support.	https://app.delv	Support		
	BEACH BALL UNDER WATER: The higher you go, the more you need to push the beach ball deeper.	https://app.delv	Support		
	own in your belly and the shaking hands, saying hello, or maybe you might like to try and knit them together using either that sort of idea or like your kneadin	https://app.delv	Support		
	And how to support the tone at the end of the phrase. The imagery I use there is an analogy of an aeroplane. Well I say when does an aeroplane, or when do up the sound and then switch off the engine. And I say right, aeroplane engines are run by the fuel, which is in the fuel tank. If you switch off the engine while	https://app.delv	Support		
	And how to support the tone at the end of the phrase. The imagery I use there is an analogy of an aeroplane. Well I say when does an aeroplane, or when do	https://app.delv	Support		
	One of my favourites actually is support. I say picture of pyramid. How deep do you think the pyramids foundations go?	https://app.delv	Support		
	And so I also think if you're doing a swoop or a portamento, imagine they're actually doing a lap pull down in the gym.	https://app.delv	Support		
	“Blowing up like a balloon” for breath	https://app.delv	Support		
	- “Hissing like a little snake” for breath control	https://app.delv	Support		
	Theme 5: Visual Technology as Imagery Strategy: Using spectrographic analysis as visual biofeedback Example: Estill Voice Print Analysis: - Represents a different modality of imagery—external visual representation rather than metaphorical thinking - Provides objective feedback that complemen	https://app.delv	technology in learning	Visual Imagery	
	But to make it simpler, I went for the triangle which has um, components like opening up to the emotions and the experiences that you’re having in the mome	https://app.delv	Tension		
	ne of the things that I often use is we have to have enough energy in the front of the tongue to balance what's happening in the back. The back is working. It	https://app.delv	Tension		
	You've really had the same which makes them laugh.	https://app.delv	Tension		
	Imagery for Performance Psychology Jan employs sophisticated imagery for managing performance anxiety and psychological preparation: Grounding and Stability: - “Roots coming from your feet going through into the ground” (physical grounding) - Visual body scan with color change (red to gold for tension release) Boundaries and Protection: - “Bubble” with flexible boundaries (student controls who is included) - “Mirrors around the outside” reflecting negativity away - “Golden beam of light” throu Significance: This theme demonstrates that imagery serves not only technical/functional purposes but also psychological and emotional dimensions of singir	https://app.delv	Tension	Tension release	
	I have them sometimes walk around the room so that they’re not like tense.	https://app.delv	Tension release		
	using speech patterns to establish natural, tension-free production.	https://app.delv	Tension release		
	It’s so sort of, it’s not even metaphorical language, it’s just ideas that you can bring to create this other world in which the singer can put themselves to start	https://app.delv	Tension release		
	But I think based on like, let’s say a lyric sheet that I had to know where I was singing, I think I started being like, horizontal lines as pitches. I think it just star	https://app.delv	Visual Imagery		
	hen I would draw like little arrows if like you had to bend the pitch or I would draw like a squiggly or I would draw five lines down if I happened to sing five no	https://app.delv	Visual Imagery		
	But yeah, sometimes I’ll definitely like add a visual to explain pitches.	https://app.delv	Visual Imagery		
	- Horizontal lines representing pitch movement (notation system) - Arrows for pitch bending or scooping - Squiggly lines for multiple notes - Hand gestures s	https://app.delv	Visual Imagery		
	Either you are imagining whatever you’re see- ing or you’re literally looking at something, a picture or a shape in the body.	https://app.delv	Visual Imagery		
	Discussion of when to use direct scientific explanation (e.g., anatomy diagrams, MRI scans) Important for students who need concrete grounding before taki	https://app.delv	Visual Imagery		
	Jan uses imagery specifically to develop students’ internal sensory awareness: “Internal keyboard”:	https://app.delv	Visual Imagery		
	? Use of visual aids (Chekhov's paintings) for certain learning styles	https://app.delv	Visual Imagery		
	Strategy: Painter’s Palette Metaphor - Description: Conceptualizing vocal timbre as a mix of colors that can be adjusted - Application: Used to modify twang a painter’s palette. You would be looking at greens and reds and yellows and blues. If I want to make something a little bit darker or less twangy. . . maybe I r	https://app.delv	Vocal tone		
	Vowels are linked to colors (oo/oh = purple = darker)	https://app.delv	Vocal tone		
	nd the analogy for getting into and above the Sajyo is an automatic car. And the gears change in the automatic car, depending on the airspeed or the engine	https://app.delv	Vocal tone		
	“Whingy witch” / “Complain- ing cat” Twangy, focused sound Global laryngeal tilt	https://app.delv	Vocal tone		
	Whimpering puppy” Soft palate elevation	https://app.delv	Vocal tone		
	- “Voiceover voice” / “Marks & Spencer voice” / “Joanna Lumley voice” (specific jazz tonal qualities) - “Slow airflow... like ripples” (controlled breathiness) - “	https://app.delv	Vocal tone		

Appendix D: Participant information sheet

Imagery as a tool of scientific translation in Singing Pedagogy: Experienced Teachers' Perspectives

Participant Information Sheet

You are invited to take part in a research project examining how experienced singing teachers use imagery to achieve objective vocal outcomes in their students. Before you decide whether to participate, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully.

What is the purpose of the study?

This study forms part of a Master's dissertation at the University of Wales Trinity Saint David, undertaken through the Voice Study Centre, UK. The aim is to systematically catalogue, through questionnaires and semi-structured interviews, strategies employed by experienced singing teachers to achieve objective vocal outcomes through the use of imagery. The research explores how imagery helps bridge scientific knowledge of vocal function with the subjective experience of singing.

Why have I been invited?

You have been invited because of your professional experience as a singing teacher. Your insights will contribute to a better understanding of how imagery supports vocal pedagogy.

Do I have to take part?

No. Participation is voluntary. You may choose not to complete the questionnaire. If you agree to be interviewed, you can withdraw at any time without giving a reason, up until the point that your data has been anonymised.

What will happen if I take part?

If you agree to participate, you will:
- Complete a short questionnaire that asks about your teaching experience, use of imagery, and examples from your practice.
- Optionally, take part in an interview conducted online, which will be audio recorded and transcribed.

What are the possible benefits of taking part?

While there are no direct personal benefits, your participation will contribute to a more systematic understanding of imagery in vocal pedagogy, potentially benefiting the teaching community.

Will my taking part in this study be kept confidential?

Yes. All responses are anonymous **unless otherwise agreed in the consent form.** If you agree to an interview, recordings will be securely stored and anonymised in transcription. Names and identifying information will be redacted. Recordings will be destroyed once the dissertation has been marked and approved by the University of Wales Trinity Saint David (UWTSD).

What will happen to the results of the research study?

Findings will be reported in the researcher's Master's dissertation and may be presented in professional or academic contexts. Any publications will use anonymised material only. Research materials will be destroyed following the completion of the project.

Who has reviewed the study?

This study has received ethical approval from the University of Wales Trinity Saint David.

Contact for Further Information

• Lead Researcher: Tanya Holt – tanya@tanyaholt.co.uk

• Supervising Tutors: Joshua Lee-Cummins – Joshua@voicestudycentre.com | Dr. David Cane – david@voicestudycentre.com

• Director of Studies, UWTSD: Julie Crossman – Julie.Crossman@uwtsd.ac.uk

Thank you for taking the time to read this information sheet. By completing the questionnaire, you indicate that you have read and understood this information and consent to take part.

Appendix E: Consent Forms

Names redacted where consent to be identified has not been given

TANYA HOLT

SINGING TEACHER & VOCAL COACH

Academic Research consent Form

Title of Project: Imagery in Singing Pedagogy: Experienced Teachers' Perspectives
Researcher: Tanya Holt, University of Wales Trinity Saint David (through the Voice Study Centre, UK).

Please read the following statements carefully. By signing and dating this form, you confirm that you agree with the statements below. If you have any questions, please contact the researcher or supervisors (contact details below).

☒ I confirm that I have read and understood the Participant Information Sheet for the study. I have had the opportunity to consider the information and to ask questions.

☒ I understand that my participation is voluntary and that I am free to withdraw at any time prior to anonymisation of my data, without giving a reason.

☒ I understand that any information I provide will remain anonymous.

☒ I give permission for anonymised quotes from my responses to be used in academic outputs.

☒ Where used, I would like my contributions to be attributed to me in the final report - YES / NO **(indicate appropriately)**

☒ I consent to the audio recording of my interview and acknowledge that this recording will never be shared with third parties and will be deleted after the dissertation has been marked by the UWTSD.

☒ I understand that as a participant I must not include identifying information about third parties in my responses.

☒ I consent to take part in this study.

Participant Name:

Signature: _____ **Date:** 11/24/25

Contacts for questions or concerns

• Lead Researcher: Tanya Holt – tanya@tanyaholt.co.uk

• Supervising Tutors: Joshua Lee-Cummins – Joshua@voicestudycentre.com | Dr. David Cane – david@voicestudycentre.com • Director of Studies, UWTSD: Julie Crossman – Julie.Crossman@uwtsd.ac.uk

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☐ I understand that as a participant I must not include identifying information about third parties in my responses.

☐ I consent to take part in this study.

Participant Name: Gökçe Kutsal

Signature:  **Date:** 26 November 2025

Contacts for questions or concerns

• Lead Researcher: Tanya Holt – tanya@tanyaholt.co.uk

• Supervising Tutors: Joshua Lee-Cummins – Joshua@voicestudycentre.com | Dr. David Cane – david@voicestudycentre.com • Director of Studies, UWTSD: Julie Crossman – Julie.Crossman@uwtsd.ac.uk

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☑ **I consent to the audio recording of my interview and acknowledge that this recording will never be shared with third parties and will be deleted after the dissertation has been marked by the UWTSD.**

☑ **I understand that as a participant I must not include identifying information about third parties in my responses.**

☑ **I consent to take part in this study.**

Participant Name:

Signature: Jan Jamieson **Date:** 21/11/25

Contacts for questions or concerns

- **Lead Researcher: Tanya Holt – tanya@tanyaholt.co.uk**

- **Supervising Tutors: Joshua Lee-Cummins – Joshua@voicestudycentre.com | Dr. David Cane – david@voicestudycentre.com • Director of Studies, UWTSD: Julie Crossman – Julie.Crossman@uwtsd.ac.uk**

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TANYA HOLT

SINGING TEACHER & VOCAL COACH

Academic Research consent Form

Title of Project: Imagery in Singing Pedagogy: Experienced Teachers' Perspectives
Researcher: Tanya Holt, University of Wales Trinity Saint David (through the Voice Study Centre, UK).

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☐ YES I consent to take part in this study.

Participant Name:

Signature: ___J Brown

20/11/2025_____ Date:

Contacts for questions or concerns

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☒ I consent to take part in this study.

Participant Name: JOHN HENNY

Signature: _____ **Date:** 12/4/2025

Contacts for questions or concerns

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X☐ I consent to take part in this study.

Participant Name:

JR Mossman

Signature: _____ Date: November 6, 2025

Contacts for questions or concerns

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Participant Name:

Signature: [redacted] **Date:**

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X

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Participant Name:

Signature: _____ **Date:** 11/25/25

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Participant Name:

Signature: [redacted] **Date:** 21/11/2025

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Participant Name:

Signature: Trudy Kerr **Date:**

Contacts for questions or concerns

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☑ I consent to take part in this study.

Participant Name: Tom Burke

Signature: Thomas F. Burke III **Date:** 02/27/26

Contacts for questions or concerns

• Lead Researcher: Tanya Holt – tanya@tanyaholt.co.uk

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Participant Name:

Signatu [redacted] **Date:** 21 November, 2025

Contacts for questions or concerns

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