

Wales Institute for Work Based Learning

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Project Title

An exploratory study on skill acquisition in intermediate and advanced singers: effects of using motor learning principles in the teaching studio; combining the principles of somatic learning and motor learning in the teaching studio in enhancing skill retention.

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Project Proposal

Background

The researcher is an independent singing teacher and a choral trainer. Over the past few months I have been contemplating the process of acquisition of skills in a singer, which subsequently become automatic and unconscious. Skill acquisition is the main aim behind taking singing lessons and training under a coach. Having never had to teach anyone to sing from scratch, I'm mostly engaged in either retraining sub-optimal technique or enhancing good technique (Gilman, 2014, p.13) During the course of working on my first module, in which I explored the meaning of good posture in singers, I came across literature in motor learning and somatic learning. In order to understand the concept of how learning occurs in singers, I have decided to pursue this topic for my current research project.

There are two themes which I would like to explore in this small scale study. The first one is the general principles behind skill acquisition itself and the most effective way to teach and learn singing. The second theme is to understand the impact of combining somatic and motor learning principles in enhancing skill retention in singers. As a teacher who encounters several types of singers while teaching in the private studio and choral workshops, it seems important for me to understand not only the general principles of initial skill acquisition but also that of continuing the learning process through a long singing career.

Motor learning or the relatively permanent changes in the capacity for skilled movement has mostly been studied in athletes or in gross muscle movements involved in performing a complex skill (Helding, 2008; Verdolini, 2000). While most of the principles can be transferred to vocal learning, there have been relatively few studies done on vocal skill acquisition (Verdolini, 2000). In particular, the benefit of blocked and delayed feedback which has shown to improve skill retention in athletes has not been researched for voice. The studies done on feedback have been quantitative and have not taken into account the individual experiences of the singers. Moreover, to the best of my knowledge, the impact of combining somatic and motor learning principles on singers' skill acquisition and retention has not been studied till date.

Project Aims

The aims of the project would therefore be

- To understand the principles of learning in general and the governing ideas of cognition in learning singing.
- To understand the impact of combining somatic and motor learning principles in the voice studio.

- To develop a tested way of giving feedback in lessons that would ultimately increase skill retention in the singer.
- To outline a potential strategy to help singers of all levels to be less dependent on teacher feedback, using the principles of somatic learning.
- Give students the opportunity to communicate how it feels when teacher feedback is withdrawn to a minimum during lessons.
- To understand skill acquisition in advanced or professional singers.

Research Methodology

According to Guba and Lincoln (1994, p.108), understanding my paradigm will not only guide me in my choice of methods, but also in ontologically and epistemologically fundamental ways. As a singer and singing teacher, it is my opinion that there is no single reality which holds good for a singer in the teaching studio. In a continuum with absolute reality at one end and no reality on the other, my opinion seems to fall midway with a possibility for several realities to be present with multiple layers. I find myself drawn to the pragmatic paradigm for several reasons. Singing teachers are engaged in a form of inquiry on a regular basis as problem solving lies at the heart of teaching. Instead of trying to prove any particular theory, this paradigm allows for the possibility of several realities and supports my goal to remain flexible and open to finding solutions to problems. It also allows me to draw on literature review from voice science to create data and draw theories by the use of abductive reasoning. Morgan (2007) terms this as 'Intersubjectivity', where the objective nature of positivism and the subjective nature of constructivism can be appreciated and celebrated at the same time. Overall, I find that the pragmatic paradigm aligns well with my ontological position and for this reason I feel it would best suit my research needs.

The next logical step in the research process is to choose a methodological approach based on my choice of paradigm. The pragmatic paradigm seems to align well with qualitative methods as the aim is not to prove an objective truth but to find meaning in the process and find a solution for the research problem. In my current employment as an independent singing teacher, I would have no access to data-capturing instruments, which seems to be a requirement for quantitative methods (Merriam, 1995, p.51). However, were I to work in a large institution in the future, I would be open to using both quantitative and qualitative or mixed methods, should the need arise. I realize that numbers and statistics are important in order to bring about any change in institutions, in which case quantitative methods will need to be incorporated in the research process (Merriam, 1995, p.51). All things considered, I feel it would be best to choose qualitative methods in my current status as an independent teacher.

I also have the freedom to use different aspects from methodologies which appeal to me in order to find solutions. I'm especially drawn to the strong coupling between research and action and the 'look-think-act' idea to find solutions, both of which are aspects of the Action Research methodology (Stringer, 2004, p.4). The use of case studies to delve deeply into a subject while using the hermeneutic circle (Laverty, 2003) as a reminder to come back to the research topic would be my main methodology for my independent research.

Methods

Keeping in mind the lack of sophisticated data collection tools and the time constraint, I have chosen the following methods of collecting data.

Recorded lessons and retention tests

Participants will attend two individual lessons where they will perform a vocal task, counting on a single comfortable tone on one exhale. In the first lesson, they will be given the opportunity to try this 30 times and will receive feedback after every 3rd attempt. The feedback which will be given after a few seconds will consist of playing the pitch and giving hints on paying attention to different parts of the torso. During the second lesson, in addition to trying the same vocal task 10 times, the lesson will be interspersed with a somatic learning lesson concentrating on expanding the lungs. The feedback given after a few seconds will mostly be posed as attention-guiding questions. The participants will take 2 retention tests, each a week after a lesson.

Questionnaire:

The participants will be asked to fill out a questionnaire, which would have open ended questions. This would provide qualitative data on how the students perceived their learning of a skill, how they felt during the lesson, particularly about the feedback timing and frequency.

Reflective journal:

Throughout the entire process, to avoid insider researcher bias, I will maintain a reflective journal and fully record my thoughts, opinions and theories (Laverty, 2003, p.28).

Data Triangulation:

In addition to the multiple methods used above, I will be conducting an extensive literature review which should aid in corroborating and validating my findings. I will also be doing the following in order to ensure the validity of my findings:

- Taking research findings back to participants for 'member checks' to see if it 'rings true'.

- Peer examination
- Declaration at the outset of any bias of the researcher
- Rich descriptions of findings

Sampling

The basic principle behind this methodology is that it is possible to produce accurate findings without having to collect data from each and every member of the research population (Berg, 2001, p.31). This is an attractive option for researchers who would be able to save time without compromising on the accuracy of their findings. For a small scale researcher like me this is an important aspect to consider while selecting participants. **Convenience samples** or availability samples rely on subjects who are available easily or close at hand (Berg, 2001, p.32). This method would be convenient for a teacher like me with students readily available. It is a challenge for a small scale researcher like me to determine the ideal sample size to produce enough qualitative data (Baker and Edwards, 2012, p.4). Epistemological and methodological considerations about the purpose of the research and the intent as well as the time available should be considered in my case (Baker and Edwards, 2012, p.42). Ultimately the aim is to reach a saturation point with the range of answers collected through the different methods (Baker and Edwards, 2012, p.5). I must be careful to draw conclusions from the sample size which is available to me. Additionally, I have to be careful to see that my students do not feel pressurized to participate in my study.

Keeping these in mind, I have decided to invite participants from the choirs that I train. By using singers who are not my private students, I would be guarding against insider bias and any prejudice. The participants I choose will be amateur singers who perform regularly in choirs, ensembles and as soloists, who are not beginning singers and who have not undergone individual training with me or any other teacher in the last one year.

Ethical considerations

With WIWBL ethical guidelines in mind, no risk is anticipated to the participants during this research. As a teacher who works with children and young adults, I might become privy to sensitive information during the course of my research. Hence it is important that I consider my legal and moral responsibility.

Oral and written permission or fully informed consent (Lincoln and Guba, 1989, p.222) will be obtained from the participants and their guardians if they are under the age of 16 or considered vulnerable (Whitehead & McNiff, 2006).

As a teacher with her own teaching studio and private practice, I'm in a position to study a particular issue in depth with access to special knowledge, people and information (Costley, Elliott and Gibbs, 2010, p.3). Nevertheless, I'm also aware of the disadvantages in this, such as the lack of impartiality and insider bias, which may prevent me from having a fresh and objective view of data and the danger of overlooking pertinent issues (Costley, Elliott and Gibbs, 2010, p.5; Mercer, 2007). The insider researcher must also refrain from expressing their personal opinions on the subject and avoid asking leading questions in order to elicit more truthful data (Mercer, 2007, p.20). In the most likely circumstance that I will use my own students as participants, I must keep in mind the possibility that students may be more willing to be truthful and reveal more details to an outsider rather than to a familiar teacher. In order to avoid this, I will be using participants from the choirs that I train who I have not taught individually before.

Personal learning outcomes

I'm personally inspired by the fact that certain principles can be employed in the teaching studio in order to make the singers better, much quicker than I thought.

I hope to gain a deep understanding of the cognitive science behind vocal learning through an in-depth literature review.

I also hope to directly apply these principles in the way I teach and also in the way my students practice their singing.

I would like to empower my students with information so they will know how to learn better and also feel confident in their singing skills.

I would like to come up with simple strategies which can directly applied in the singing studio to enhance learning, which would also be beneficial to the wider singing teaching community.

Project Report

Introduction

Singers expose themselves to a teacher's instruction in the hope that there will be an improvement in their singing technique. According to Holding (2008), the successful transfer of technique from teacher to student ultimately depends on the ability of the teacher to impart a motor skill. It is strongly suggested that music teaching needs to move from how information can be most easily delivered to students to how it can be structured for optimal student learning (Nix, 2017). Motor learning itself is a several step process through which muscular skills are acquired, retained and hopefully, automatic (Holding, 2008). As a result of the motor learning process, relatively permanent changes can be observed in performance and this comes as a result of practice or exposure (Verdolini, 2000). However, it is important to note that recent research shows that knowing what to train does not necessarily mean the teacher knows how to train it (Verdolini, 2000). Voice pedagogical literature is full of information on how the vocal apparatus works, what the ideal posture should be and how to develop the vocal apparatus (Nelson and Blades-Zeller, 2002). When teaching, because we are looking at the person from the outside, we assume that we understand internal relationships based on what we see and tend to make comments based on our understanding of posture (Gilman, 2014, p.18). Teachers are, essentially, retraining patterns which are ingrained and this can be a challenge (Gilman, 2014, p.13). When employing motor learning theories in pedagogy, irrespective of the methods used, be it physical demonstration, hands-on manipulation, verbal description or imagery, it is usually assumed that the student has internalized the information and understood what is required. However, this is not always the case (Gilman, 2014, p.12). While the student requires to pay attention and be willing to expend effort for the cognitive processes of learning and memory to be successful, the teacher also needs to understand that there is a difference in accumulating knowledge for oneself (learning) and translating it for use (teaching) (Holding, 2020, p.73). This kind of vocal learning involves a partnership (Holding, 2020, p.72), where the teacher works with the students nervous system to create permanent changes in complex movement (Gilman, 2014, p.5; Nelson and Blades-Zeller, 2002). This kind of work would also ensure that the student does not unwittingly strain another part of the body in order to do what the teacher has verbally described (Nelson and Blades- Zeller, 2002).

In my current employment as an independent singing teacher and choral trainer, I realize that I have several pedagogical methods that are available to use, depending on the needs of the student. While some methods enhance learning, others improve performance and from the motor learning perspective, a temporary shift in performance does not indicate that learning has occurred (Holding, 2020, p.103). In fact, learning is dynamic, unstable and messy and can suffer when we are not willing to be appear silly, uncoordinated or musical (Holding, 2010; 2020, p.108). Such an attitude in

the studio may also make the student overly dependent on the teacher for feedback or make the teacher give too much augmented feedback in order to ensure a perfect performance (Helding, 2020, p.134). Augmented feedback, which is typically verbal feedback (Helding, 2020, p.130), may not only be interpreted differently by the student from what the teacher is asking (Nelson and Blades-Zeller, 2002, p.12), but also proves to be a poor substitute for feeling when given concurrently or immediately (Helding, 2020, p.131). Considering that augmented feedback is thought to be the single most important variable for motor learning apart from practice, it seems important that I understand the choices available and the consequences of the choices made during the course of a lesson (Helding, 2020, p.130; 2008).

The questions which this project undertakes to answer are

- How do singers learn new skills?
- How much and how often should augmented feedback be provided in the voice studio to enhance skill retention?
- How can the development of heightened awareness of sensations and feelings in the singer using Feldenkrais ATM lessons enhance skill retention?
- In what context does a student feel uneasy when augmented feedback is withdrawn?
- What strategies can I use to improve my own teaching?
- Do the learning principles I use in my teaching studio and workshop scenarios cater to the organic learning needs of different students?
- How can a singing teacher effectively apply these learning principles in a private individual lesson context?

Literature review

Motor learning:

Motor skill acquisition is a branch of cognitive science which benefits from studies in neurophysiology, psychophysiology, learning and information theory, basic physical education and in the voice world, is the successful transference of technique from teacher to student (Helding, 2008). A central goal of motor learning research is effortlessness combined with accuracy, speed and consistency (Wulf and Lewthwaite, 2010). The acquisition of vocal technique means the ability to use a set of learnt skills which allows the voice to be used with freedom, in a wide variety of desired ways, while making strain impossible (Shewell, 2009, p.26). A student is said to have learnt something when there is a long term change in behavior resulting from practice (Kleinman, 1983). Verdolini (2000) proposes that explicit learning or 'knowing that' is in stark contrast to implicit learning or 'knowing how' and that the latter is in fact memory without awareness which is most

relevant for singing performance. Holding (2009) says that in the teaching of singing, procedural learning or 'know how' knowledge, which is primary and essential cannot be replaced by declarative learning or 'know that' knowledge; however, declarative learning serves to elucidate and enrich procedural knowledge. Implicit or procedural memory is reflected by prior exposure to stimuli (Graf and Schacter, 1985; Schacter, 1987; Roediger, 1990) and practice or repetitions involving the processing of perceptual or sensory information (Jacoby and Dallas, 1981).

Attention in Motor Learning:

The act of learning involves the neural process of firing and wiring together of neurons and this can only happen when the learner chooses to pay attention to new input being received (Holding, 2012). Attentional processing of perceptual or sensory information or being in the moment without judgment, comment or conclusions is crucial for acquisition of implicit memory and learning, meaning that the use of metaphorical images could work against voice development in certain cases (Verdolini, 2000; Jones, 1976). Since the ability of the brain to consciously attend to information is limited, it seems better for singers to "chunk" and automate cognitive processes by practicing, thus requiring very few attentional resources during performance (McCarther, 2018). It is suggested that an external focus of attention on the effects of the movement, is beneficial for both effectiveness and efficiency of the movement itself (Wulf, 2013). This robust principle can be applied to varying levels of expertise and different groups of learners, especially musicians (Wulf, 2013). Executive or selective attention, which allows for certain incoming stimuli to be heeded while others are suppressed, governs the conscious control of attention and enables self-control (Holding, 2012; Maxfield, 2018). Thus attention is selective, requires mental (cognitive) effort and is limited (Maxfield, 2018). It is, however, different from awareness in that awareness is a state of consciousness where the perception of sensory stimuli is not necessarily understood or capable of being consciously recalled (Maxfield, 2018). This unconscious awareness can be recalled through selective attention and acts as the brain's internal mould of the body. In the attention schema, unconscious awareness serves as the internal model of attention, permitting attention to be precise and stable (Maxfield, 2018).

Although motor skill acquisition requires attention and conscious reflection, the ability to perform the skill itself seems to be free of conscious recollection (Indik, 2006). Intense focus in performance allows for a unification of mind and body, allowing the individual to perform at fullest capacity, with the body moving effortlessly and practiced technique occurring almost automatically (McCarther, 2018).

Evidence of Motor Learning:

Repeatability is the evidence that something has been truly learnt, either a motor skill or intellect (Helding, 2013). True learning of a skill is evidenced by its long term retention and generalizability, the former being the ability to perform the skill at near or same level as the skill acquisition stage and the latter being the ability to carry over the skill to new but similar tasks (Bergan, 2010). In fact, the ability to remember or **the act of rewiring of the nervous system in a lasting way** is the most essential requirement for an organism to learn from experience (Marcus, 2004). Hence, there can be no learning without memory, which itself comes in two basic types – **short-term and long-term**. The former creates biochemical changes in the brain by the release of neurotransmitters, while the latter causes anatomic changes in brain tissue due to the increase in synaptic connections (Helding, 2013; Kandel, 2006; Schlaug, 2009). This long term storage occurs only after a continued process of release of neurotransmitters, long enough to allow the body to respond to protein creation which then permanently changes synaptic connections and thus, the structure of the brain (Indik, 2006; Snyder, 2009). The action of transferring short-term memories to long-term ones through a working memory system, also called as **memory consolidation**, constitutes the act of learning something (Helding, 2013). A period of instability is observed during this process, when a new motor skill can easily be superseded by conflicting information (Indik, 2006). Long term learning is also positively affected by the introduction of desirable difficulties or challenges, which may create immediate difficulties for the learner while boosting long term retention (Bjork, 1994). New memories are created by the absorption of new information and its subsequent combination with old information or the long term memories already possessed in the system (Helding, 2013). There is a danger that unless the learner's pre-attentional state of mind is primed for the new learning that is about to occur and he or she puts in effort, huge parts of the new information received might be pruned away by the learner as it does not resonate with the memory already possessed (Helding, 2013). Thus, the term 'motor memory' or 'motor learning', which is the neural structure in the brain which provides the trace for the neuron firings in the brain required to bring about a body action, is a set of processes associated with **practice or experience** which leads to **permanent changes in skilled behavior** (Indik, 2006; Schmidt, 1982, Verdolini, 2000).

Importance of Practice in Motor Learning:

Motor skill acquisition, thus has a further requirement of practice on the part of the learner and this is particularly important in the case of singing students because of the vast majority of time spent on their own, away from the teacher (Helding, 2008). It has been shown that **variable and random practice** is more effective than blocked and non-variable practice (Helding, 2008; Merbah and Meulemans, 2011). Since a random schedule requires superior cognitive demands compared to a blocked schedule, it not only promotes efficient retention and transfer of abilities, but also eventually

manages to elicit a more or less consistent task response (Helding, 2008; Merbah and Meulemans, 2011). Blocked practice, on the other hand, boosts short term performance while long term learning and retention stagnates (Helding, 2008). The voice, being a complex system which depends on the optimal coordination among its various subsystems, benefits from variable practice which takes into account these interrelationships (Helding, 2008). However, low skilled learners may benefit from blocked practice rather than variable practice, because the introduction of difficulties before the learner can manage them could potentially do more harm than good (Helding, 2008).

Importance of Sleep in Learning:

Memory consolidation is also aided by sleep, so much that it can be said that learning occurs during sleep (Donlea, Thimgan, Suzuki, Gottschalk and Shaw, 2011). Apart from synaptic pruning or the clearing away of weak synaptic connections while leaving the strongest connections behind, sleeping replays the short term memories gathered during the day, thus helping in memory consolidation (Helding, 2013; Walker, 2018).

Importance of Augmented Feedback in Motor Learning:

Another requisite of skill acquisition is the information about performance or the knowledge of results. This is feedback on how they have managed to execute the task in relation to the set target performance (Verdolini, 2000). Although it is vital to learning, more is not necessarily better. In the case of complex motor skills like singing, which require spatial and temporal coordination of various sub movements, **blocked feedback** or the withholding of information about performance is thought to enhance learning in addition to helping the learner's own processing (Verdolini, 2000; Wulf, Horger and Shea, 1999). However, this seems true only for advanced singers, as students do best with frequent feedback early on in their training (Helding, 2008). With regard to online lessons, keeping in mind the technological distractions which can take the singers attention away from the singing, it is essential that feedback is provided with intentionality and purpose (Maxfield, 2020). According to Maxfield (2020), this can be accomplished by answering the questions why or the reason for providing feedback after a particular demonstration, how to provide feedback, that is, choosing between verbal feedback, teacher demonstration and using biofeedback visualization and when or the timing of the feedback. **Terminal feedback** is considered most effective, especially when learners are asked to provide their own terminal feedback by self- evaluation (Helding, 2008). Verbal coaching while the student is singing, also known as concurrent feedback may boost short term performance but in all likelihood depress true learning (Helding, 2008; 2020, p.131). Maxfield (2011) suggests that one of the best practices for training new motor skills is the reduction in the frequency of augmented feedback during skill acquisition. Since his study was the first one done in the acquisition of new vocal skills, Maxfield (2011) suggests researching other motor learning principles at the end of his thesis, namely delayed feedback and variability of practice. As

augmented feedback is directly under my control as a teacher, I would like to consider researching delayed and infrequent feedback in my current research study.

As a teacher and singer myself, I am not yet clear about transferring ML principles directly from athletic skills to vocal tasks. Since the singer is the instrument and the voice is dependent on the body, the vocal mechanism or vocal systems complex comprising of respiration, phonation and resonance depends on the skeletal, muscular and nervous system to be working well (Gilman, 2014, p.1). **Sometimes no amount of trying or practicing can help a singer whose somatic organization is inefficient** (Gilman, 2014, p.4). This is particularly true in my observation of singers who have advanced in age but may be following a practice regime which worked well for them before. Is it possible therefore, to ignore somatic imbalance in the teaching studio and progress directly to the 'skill acquisition' or 'motor learning' stage? According to Gilman (2014, p.5), such issues can be addressed only by the teacher having a conversation with the student's nervous system rather than through their conscious, cognitive mind. Even if there was no somatic imbalance or an obvious issue that needs to be addressed, there seems to be relationship between the felt or kinesthetic sense, effort levels and a good sound. Exploring and developing kinesthetic sensitivity aids to bring 'all' of the singer into use while singing, apart from enhancing his or her ability to sing while allowing them to recognize and ameliorate temporary problems (Nelson and Blades-Zeller, 2002, p.5). When feedback or knowledge of results or knowledge of performance is withdrawn and given infrequently or delayed (Helding, 2020, p.130) to such a kinesthetically sensitive singer, it could guide the student to discover a free, beautiful sound and *'to develop that voice until it becomes consistently accessible and expressive'* (Nelson and Blades- Zeller, 2002, p. 1).

Somatic learning:

According to Gilman (2014, p.13), we have a somatic or body sense, which is partly a physical self-image as well as a vocal self-image. While our somatic sense of self develops through our movements and experiences, we are also moving according to our somatic map (Gilman, 2014, p.13). If our somatic map is not well developed, incomplete or altered, then it may not allow us to move, behave and do whatever we want in an efficient manner (Gilman, 2014, p.17; Feldenkrais, 1949, p.40). This seems especially true in learning singing, where the teacher guides the student through a somatic journey which is experiential, enabling the student to re-draw and expand their vocal self- image relating to singing performance. This happens not through an intellectual awareness but by **a conversation with the nervous system** (Nelson and Blades-Zellar, 2002, p.1), a process which is impossible without the student paying attention to the task (Gilman, 2014, p.7; Helding, 2012). If the nature of teaching is linear, where focus is on one aspect of vocal production at a time, the parts may unintentionally be isolated from the whole, and the student is expected to integrate everything on a somatic level and in case the student is unable to do so, it is essential that

the teacher engages with the student's nervous system to help them develop somatic awareness which helps them to redraw their somatic map (Gilman, 2014, p. 13).

Learning can be easy when consciously learning a new task (Gilman, 2014, p.16). However, in the voice studio, we rarely encounter a singer who is learning to sing for the first time and the teacher is usually engaged in changing habituated movements, which is not so easy (Nelson and Blades-Zellar, 2002, p.6). While addressing deeply ingrained physical habits and to make long lasting changes, it seems essential to address physical tensions apart from the act of singing, particularly using the mind's awareness of the body (Ohrenstein, 2000). When a student is provided with a directory of movement options, then the nervous system knows what to do and how to move, thereby integrating new information (Gilman, 2014, p. 13). Conversely, when an action or movement is not part of the student's nervous system and there is no internal reference, then there is a difficulty in learning. Hence **the process of learning how to sing seems to be not just about learning new movement patterns, but also learning to change old, comfortable habits**. Thus, somatic patterns, namely the vocal self-image and the somatic map, must change in the process of developing or rebuilding a vocal technique (Gilman, 2014, p.13).

The ability to achieve a deeper connection to the voice while moving the body seemed to be related to the singer's body awareness, flexibility, inner connectivity and balance and the needs seem to be unique to each voice student where some are able to produce a free sound from stationary positions and others lose freedom if they moved or changed posture (Rootberg, 2000). Burke (2014) has recommended that voice training and rehabilitation follow the concepts of *Brainwork* or studying the mental and intellectual concepts related to voice, *Bodywork* or exercises to address muscular imbalances that may be affecting laryngeal effort, *Voicework* which aided by Bodywork, allows to get into solid singing technique and lastly *Fireworks* or skills which lead to a magical performance.

Somatic Education Techniques used in Voice Training

Psycho-physical techniques are used by voice teachers when teaching voice production, as these methods engage aspects of the person's physical, mental and emotional functioning, reorganize the individual's consciousness to a degree, provide access to previously inaccessible deeper blocked areas, heighten kinesthetic awareness, alter the relationship of the body in space and establish a more effective mind-body unity (Corrigan, 1997).

A few of the popular techniques used in combination with voice training are discussed below:

The Feldenkrais method, the underlying principle of which is to improve individuals' awareness of movement and allowing them to change these movements and perform them in a more efficient

manner, has been used to improve breathing and voice production in stage performers through ATM lessons (Gordon, Goldberg, Rockwell & Netsell 2013). Functional Integration of Feldenkrais method has also been used to improve breathing in an individual singing lesson context (Nelson and Blades-Zellar, 2002, p.2). There are five key ideas in the development of the Feldenkrais Method (Nelson and Blades- Zellar, 2002, p.5):

1. Life is a process
2. Effective movement involves the whole self as necessary for effective movement
3. Learning is the key activity of humans
4. The necessity of choice
5. The logic of human development

My questions regarding learning in advanced level singers and those who are advanced in age were answered by these ideas of the Feldenkrais method. It is believed that the use of this approach helps in the learning of new movement patterns and used more effectively (Gordon, Goldberg, Rockwell & Netsell 2013). Moreover, the ATM exercises involve the part of the nervous system that control movement and not done through conceptual consciousness or 'thinking', enabling changes to be retained and amplified. Thus, by reprogramming the functioning of the nervous system, singing problems which arise from faulty learning, injuries and structural problems can be overcome (Nelson and Blades-Zellar, 2002, p.4)

The Alexander Technique trains awareness of habits which the body has developed over time and allows the user to transform bad habits into more productive ones which helps the person to move with more ease and comfort. It is recommended that students of this discipline work directly with an Alexander teacher to gain maximum benefit (Peterson, 2008). The technique reminds the student to avoid "end-gaining" and to let go of "trying" (Corrigan, 1997).

Fitzmaurice Voicework, a holistic approach to the voice, explores the dynamic interactions of the body, breath, imagination, language and voice. Students of this discipline learn to experience the difference between the central and autonomic nervous system in the course of their skill development. Certified teachers of this discipline move away from the traditional ways of teaching like information delivery and instead, focus of awakening deeper awareness and perception in the student (Morrison, Kotzubei and Seiple, 2017; Kollwitz, 2016).

Somatic VoiceWork™ The LoVetri Method, which is a body based method of voice cultivation developed by Jeanette LoVetri, has been advocated to provide the teacher with an understanding on how to construct his or her own exercises based on the needs of the student in the lesson (LoVetri, 2009; White, 2017). Mastery of this practice takes years to develop and teachers are expected to attend workshops to learn this method in detail (White, 2017).

Corrigan (1997) encourages voice teachers to ask themselves why they would like to use a particular technique and if they have been trained to responsibly use these techniques. Since I'm not trained in any of the above disciplines myself, the alternative was to suggest that the student find a practitioner to work with separately. However, this may not be feasible in my context as it is difficult to find such a practitioner in the country where I live. There is a possibility for me to undergo certification in any of the above disciplines, should I wish to in the future. In my current status as an independent singing teacher, it seems necessary to incorporate a somatic learning technique into my lessons in order to reap the full benefits of the learning process. The solution that seems practical in my current context is to use the Feldenkrais ATM lessons which are readily available and to incorporate these principles into my lessons (Blades- Zeller and Nelson, 2002, p.13). This also fits well into my pragmatic approach to find a solution with the resources which are readily available in hand (Mackenzie and Knipe, 2006).

Somatic Learning (Feldenkrais Method) before Motor Learning?

Motor learning, which is defined as the process of acquiring the capability for skilled actions, is believed to result from task-specific activities (Schmidt, 1998; Gordon, Goldberg, Rockwell and Netsell, 2013). While it seems apparent that when learning a certain movement, it is essential to practice the specific tasks that are going to help in achieving the particular targeted movement, sensory movement feedback is also considered to be an important component of the motor learning process (Gordon, Goldberg, Rockwell and Netsell, 2013). Although using Feldenkrais Method in the form of ATM lessons appears not to be task-specific as it focuses on the body as a whole, it relies on sensory and kinesthetic awareness through feedback from a person's movement explorations and adaptations. Hence it is argued that the Feldenkrais method does include task specific sensory movement techniques and can be a powerful intervention tool in motor learning (Buchanan and Ulrich, 2001; Feldenkrais, 1972, 1981; Lundblad, Elert and Gerdle, 1999; Gordon, Goldberg, Rockwell and Netsell, 2013).

Teaching Strategy

My literature review has brought the following ideas to light

1. Singing is a complex motor skill (Helding, 2008; Verdolini, 2000)
2. Motor learning requires repetition of specific task-related movements with attention (Helding, 2008; 2012)
3. In order for the student's cognition to be used, it is necessary to provide delayed and infrequent feedback (Helding, 2008; Verdolini, 2000).
4. Motor learning is different from Motor Performance, the former often being messy and unstable (Helding, 2020).

5. The learning itself cannot be observed, only the proof can be seen in the practiced action becoming automatic and unconscious (Helding, 2013).

The following ideas and questions were also considered as a part of the Literature Review:

- No amount of trying or practicing can help a singer who has a poor somatic organization (Gilman, 2014, p.4).
- Since the body is the instrument, should Somatic learning precede and go hand-in-hand with the motor learning of vocal technique (Buchanan and Ulrich, 2001: Feldenkrais, 1972, 1981: Lundblad, Elert and Gerdle, 1999; Gordon, Goldberg, Rockwell and Netsell, 2013) ?
- Can somatic learning provide movement options for a singer and help to redraw the somatic and vocal image map, thus helping to eliminate habituated body patterns (Gilman, 2014, p.13) which cannot be done using motor learning principles alone?

To the best of my knowledge there has been no research study done on combining somatic and motor learning principles in the teaching of voice and the benefits this holistic approach may have in the retention of skills. Much of the studies in motor learning have also been done on non- vocal tasks and I would like to study this more in relation to singing, particularly in the role of delayed and low frequency feedback during skill acquisition. I believe there is a gap in the research and I would like to use this research opportunity to study:

- the effectiveness of using motor learning principles in teaching voice skills
- the advantages of using Feldenkrais Method ATM lessons and somatic learning prior to and during the teaching of motor skills and
- The perspective of the singers on their learning process.

By doing this research study I hope to find effective strategies which can be directly used in the teaching studio, which would benefit me and the wider singing teaching community.

Methodology

Ontological and Epistemological position:

The aim of the researcher was to ascertain the principles of effective skill acquisition and retention in singers in a private teaching context. I wanted to discover the principles that enabled learning in the student. I aimed to remain open and curious during the process of collecting the qualitative data, even though I had gained some ideas from the literature review. Hence, keeping the research

question as the center of my study, I took the pragmatic approach in this study, which allowed me to use any methods necessary in order to meet the needs of the research (Mackenzie and Knipe, 2006).

Methodology

As a first time researcher, who is exploring a field which does not have much study done in the field of voice, I was drawn to the methodology of '**bricolage**' which provides a 'critical, multi-theoretical, multi-methodological approach to inquiry' (Rogers, 2012). Encouraging the use of tools and methods available in hand to solve the research question, this methodology suits my pragmatic approach to solve the research question (Kincheloe, 2004).

Another methodology that I have been drawn to is the use of **case studies** which encourages a lot of data gathering techniques like in-depth interviews, questionnaires, participant observations, background which is suited to my small scale research (Berg, 2001, p.224, Denscombe, 2003, p.30). It will also enable me to spotlight one instance while doing an in depth holistic study while focusing on the processes in the whole settings (Denscombe, 2003, p.32). While choosing participants, I'm aware that although each case may be unique they can be considered as a single example of a broader class of things (Denscombe, 2003, p.35; Berg, 2001, p.229).

Another methodology which I have drawn on is the use of the '**hermeneutic phenomenology**' which will not only help me to study the lived experiences of the participants (van Manen, 1997), but also aided as a springboard to help me analyze data from different perspectives using the hermeneutic spiral (Paterson and Higgs, 2005). I kept the research question always before me, to help me interpret 'human practices, events and situations' (Crotty, 1998).

The '**Action Research**' methodology appeals to me mainly due to the tight coupling of research and action, both of which proceed in parallel with each other (Rowley, 2003). This method also includes all types of data gathering methods and has all the benefits of work based learning such as solving specific work based issues and furthering work related interests and aspirations (Costley and Lester, 2009). Another important aspect of action research is to bridge the gap between research and practice (Johnson, 2012; Mills, 2011). It also encourages teachers like me to be continuous learners (Mills, 2011).

Methods

While collecting data for this study, I was concerned about hearing about the experiences of the participants about their learning. Since the learning experiences of a singing student have not been documented much I wanted to focus on their experiences and give them a chance to express what

they felt during the process (Merriam,1995, p.51). I was also concerned about strengthening my research by the use of triangulation (Mackenzie and Knipe, 2006, p.7).

Questionnaire (Pre and Post lessons)

Using the themes which I came across while doing my literature survey, I prepared questionnaires, both for before and after the participant's lessons with me (Denscombe, 2003, p.145). After choosing the 5 participants for my study (they had to be regularly performing singers who had not taken singing lessons with me before and have not attended formal singing lessons in the last year), they were asked to fill out the pre-lesson questionnaire. The themes which were included were their ideas on learning a new skill, vocal technique and its significance and also if they identified with the skill of 'breath management' which I had chosen as the skill to concentrate on during the 2 lessons. The questions were open ended to allow for the participants to express themselves freely in a truthful manner. This would also generate qualitative data which would help me identify themes and patterns from the responses generated. The pre-study questionnaire was answered using email/personal messaging. The post study questionnaire, which asked open ended questions regarding their learning experience, was answered through email/filled out forms.

Semi-structured interviews/Discussions

When I received the completed pre-study questionnaire, I realized that there is a need to clarify some of the responses provided by the participants. Hence I used the themes generated by the questionnaire to begin each participant's first lesson with a short conversation regarding their responses (Gill et al, 2008; Berg, 2001, p.71). They were given the opportunity to elaborate on their answers. It also gave me an opportunity to collect information regarding their singing background, practice habits and to understand further their issues related to breath management. These interviews lasted between 5 and 10 minutes for each participant and served as a good way to begin the first lesson. The participants were also provided an opportunity to discuss what they felt after the completion of the second lesson and during the second retention test.

Lessons

Since my research study explores skill acquisition and retention in singers, I scheduled two individual lessons with each participant. Using the themes collated from my literature review, I designed the first lesson to include principles mainly from the motor learning field, namely paying attention, providing delayed and infrequent augmented feedback, several trials of the task, providing an external target or focus and use of imagery/metaphors to explain body mechanisms. The vocal task which was worked on was counting on a single exhale on a single note and attempting to reach a target number, thereby increasing breath management/capacity of the participant. This lesson

format was inspired by Lynn Maxfield's (2011) thesis on skill retention in classical singers and his recommendations for further research.

The second lesson included principles of somatic learning along with the principles of motor learning from the first lesson. The lesson included aspects of Feldenkrais ATM lessons which focused on providing new patterns while breathing. The lesson was formatted with the help of Robert Sussuma, a singing teacher and a Feldenkrais practitioner (email conversation in appendix). In both the lessons, along with the vocal task, the participants used the first verse of the hymn 'Abide with me' as a reference to track their progress in breath management.

Retention tests

The participants appeared for two retention tests, one at the start of the second lesson and the other a week after the second lesson. The singers were asked to repeat the vocal task and the first verse of 'Abide with me' to see how much of the previous lesson's learning had 'stuck' and become automatic and unconscious.

Qualitative data handling

The responses from the pre and post lesson questionnaires, discussions held with the participant before and after the lessons and the teacher reflective journal entries were used for assessing the qualitative data. The responses from the pre study questionnaire not only served as a springboard for discussion before the first lesson with the singers, but also served as a useful way to understand the singers' point of view regarding their learning process. The teacher's reflective diary was used to collect my thoughts, biases and observations during the course of the study. As the singers were not my private students, it was heartening to see their excitement and interest in participating in this study and their willingness to share their thoughts and opinions during the study. As a researcher, there was constant learning 'on the go' as I assessed and evaluated my methods of lesson delivery and the language I used to communicate ideas to the singers as I transcribed the lessons with the participants.

Qualitative results and analysis

As a first time researcher, I was initially unsure about where to begin coding my data. After reading through Saldana's text on qualitative coding, I began to code as soon as I began collecting the data and did not wait till the data collection process was completed (Saldana, 2016). I was also relieved from my fear of being biased and reading into the results, knowing that as humans we naturally make connections and see patterns (Saldana, 2016). As I dived into this 'interpretive act' of coding simultaneous to data collection, initial themes began to develop and these were used during the subsequent data collection (Gil et al, 2008). Keeping my research question before me at all times, I

looked for recurring patterns as singers acquired and retained new skills. I decided to begin with in Vivo coding as it made sense to use the singers' direct language as the primary data source (Saldana, 2016). During the second round of coding I used a lumping description method which served to develop categories from which the following themes emerged.

Understanding singers perception of learning : Pre-lesson questionnaire and discussion coding analysis

Each of the participants filled out an open ended questionnaire before their first lesson, which had the following questions regarding learning/vocal technique:

1. What do you understand by the term vocal technique?
2. What does the word learning mean to you with regard to vocal technique?
3. How do you usually learn a new skill?
4. How useful do you think it would be to know how to learn any vocal skill effectively and efficiently?

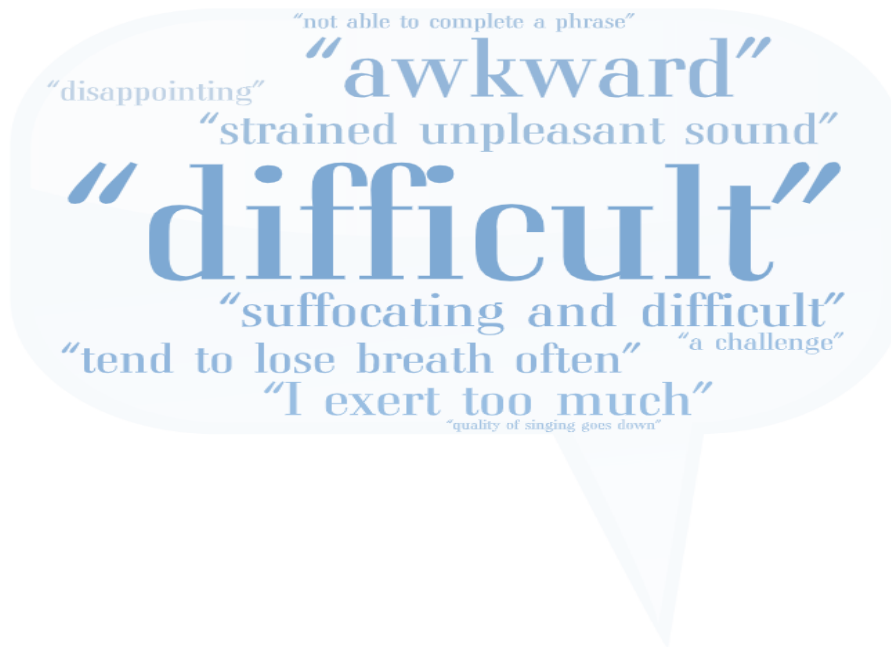
The following themes emerged as a result of the coding of this data (attached in appendices).

- **Singers were naturally perceptive to sensations and tended to rely on them while singing**

The singers seemed to have an innate awareness of the sensations of singing with good technique and also seemed able to perceive the differences in their singing when it became easier. Some of the **phrases used to describe what they felt would be sensations of singing with good technique were:**

"quality of sound will be pleasing to the ear"
"make it more easy"
"shouldn't be strained"
"it should feel good"
"ease and precision"
"easy" "satisfying"
"will be able to sing very easily"

Singers were also aware that improper technique would be evident in the singing itself. Some of the phrases used to describe **what they felt were sensations of not singing with the right technique:**



Effortful singing is often felt as strain or muscle fatigue and most often are indicators of poor organization or efficiency in the system (Gilman, 2014, p.21). This often occurs when the muscles overwork and attempt to do the work of gravity, thereby reducing the ability of the body to move easily (Gilman, 2014, p.20). These patterns can be retrained by working on the singers' nervous system through increased self-awareness and carefully directed movements (Feldenkrais, 1972, p.68). The acquisition of vocal technique should ultimately be felt as effortless and free singing, where straining is impossible (Shewell, 2009, p.26). Even if there was no somatic imbalance or an obvious issue that needs to be addressed, there seems to be a relationship between the felt or kinesthetic sense, effort levels and a good sound (Nelson and Blades-Zeller, 2002, p.5).

The awareness of both extremes of "easy" and "difficult" singing was seen in the participants who had undergone personal tuition before as well as those who had not. This innate sense of kinaesthetic awareness seemed to be enhanced and heightened after the somatic lesson with the researcher and helped them not only to pay more attention to their singing, but also to observe the changes which had taken place in their singing by the end of the lesson (Corrigan, 1997).

- **Singers understand the importance of practicing on a regular basis:**

From the answers to the questionnaire, it was evident that all the participants understood the need to go through a 'practice' process in order to get better at their craft. Although their preferred practice routines differed, ranging from following Youtube videos to autonomous practice sessions, it was clear that they understood that there was work involved in the learning process and effort that needs to be put in (Helding, 2008).

Some of the phrases they used were:



:

Motor learning requires the repetition of the task for it to become automatic and unconscious during performance. In the case of singing students, the practice process is even more important because of the amount of time spent away from the teacher (Helding, 2008). Considering that some ways of practice like random and variable methods are better than others (Helding, 2008; Merbah and Meulemans, 2011), it seems necessary that singing students are guided to learn how to practice on their own.

Phrases such as the following came up during the initial discussions:



The participants also seemed to understand the ultimate goal of practicing regularly, which is **improving the overall efficiency of their vocal instrument**. Effortless singing seemed to be the ultimate goal of practice and the acquiring of vocal technique as the means to reach this goal. A central goal of motor learning research is effortlessness combined with accuracy, speed and consistency, thus making it impossible to strain (Wulf and Lewthwaite, 2010; Shewell, 2009).

Thus, from the pre-study questionnaire it became apparent that singers' goal of practicing was to incorporate technique into their voice, enabling them to sing easily and freely and making singing a pleasurable experience (Shewell, 2009, p.26; Holding, 2008).

Post- lesson questionnaire and discussion coding analysis

The participants were given a questionnaire after completing the two lessons and were also given a chance to express their opinions in a short discussion after the second lesson and retention test. The following questions were presented to the participants:

1. What are your main take-aways from the lessons?
2. Have you noticed any changes in your singing/use of the voice since the lessons?
3. During the lessons, what did you focus on when teacher feedback was not given to you?
4. How will this learning affect your singing or practice in the future?

The following themes emerged after the coding analysis of this data.

- **Sensing the difference between learning and having learnt a skill**

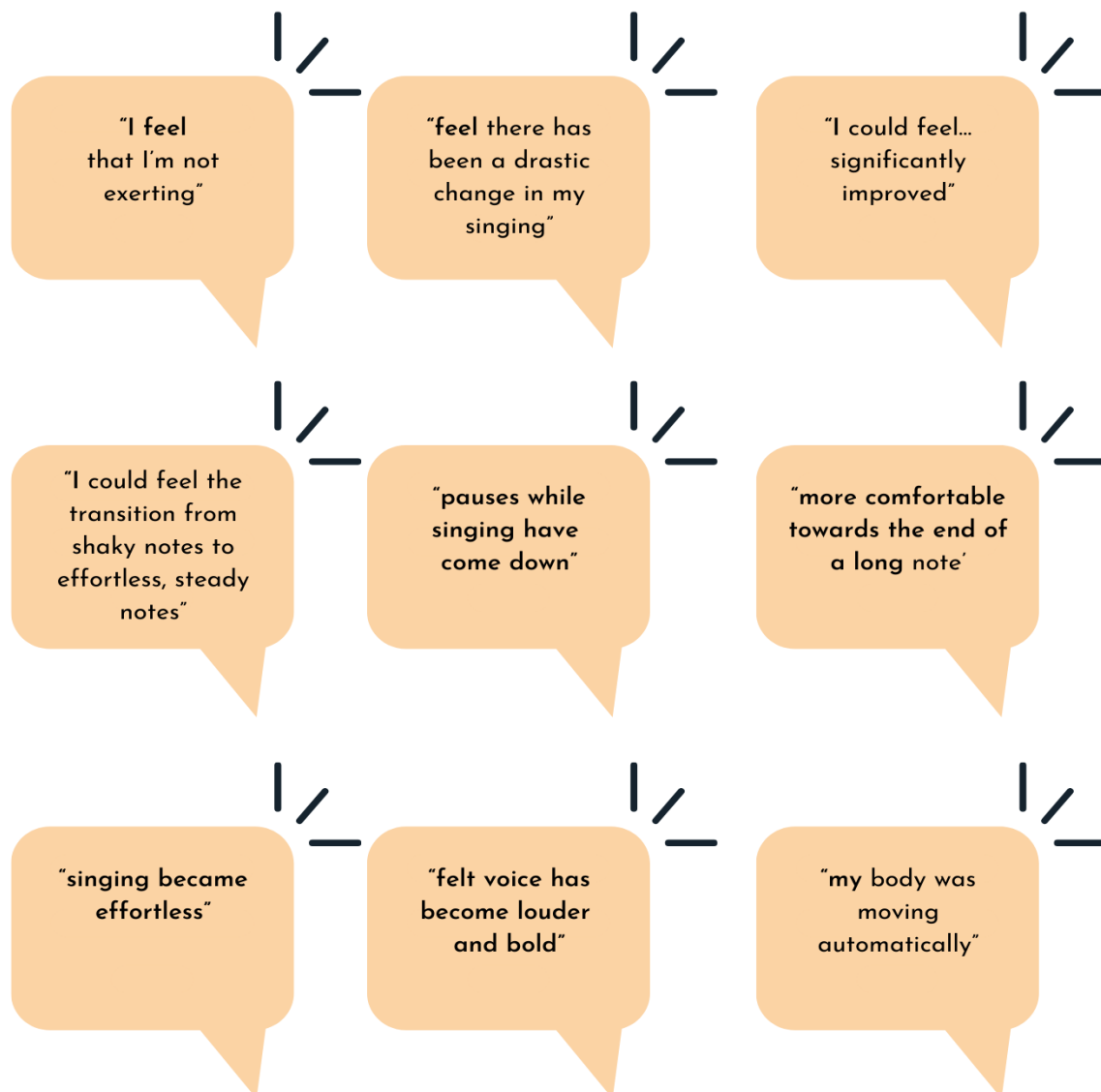
The participants, owing to the increase in attention and awareness during the lessons, were able to sense the difference between when they were learning a skill and when it happened “automatically” (Holding, 2013). Since the evidence of learning is in the learnt action being displayed, the retention tests proved that the participants had indeed ‘learnt’ the skill and were not ‘trying’ to do it anymore. Evidence of a motor skill being learnt is in its retention, repeatability and generalizability, all of which were experienced by the participants (Bergan, 2010; Holding, 2013).

The learning itself cannot be observed, only the proof can be seen in the practiced action becoming automatic and unconscious (Holding, 2013). The responses provided by the participants showed that they observed they were not ‘trying to make anything happen’, and the feeling was quite different from what they had done during the lessons. They also noted that their body was working automatically and sensed a change in their voice. Thus, the singers perceived the difference between Motor learning and performance (**Motor learning is different from Motor Performance, the former often being messy and unstable** (Holding, 2020)).

This unconscious automaticity in performance freed the singer to concentrate on emotion and presentation of the song. The singers also reported feeling relieved and not worried after having

learnt the skill of breath management, because it allowed them to ‘play with their voices’ and experiment with ‘tone’, expression and colour. Since the ability of the brain to consciously attend to information is limited, it seems better for singers to “chunk” and automate cognitive processes by practicing, thus requiring very few attentional resources during performance (McCarther, 2018).

The phrases they used to describe how it felt when the new skill was automatic were:



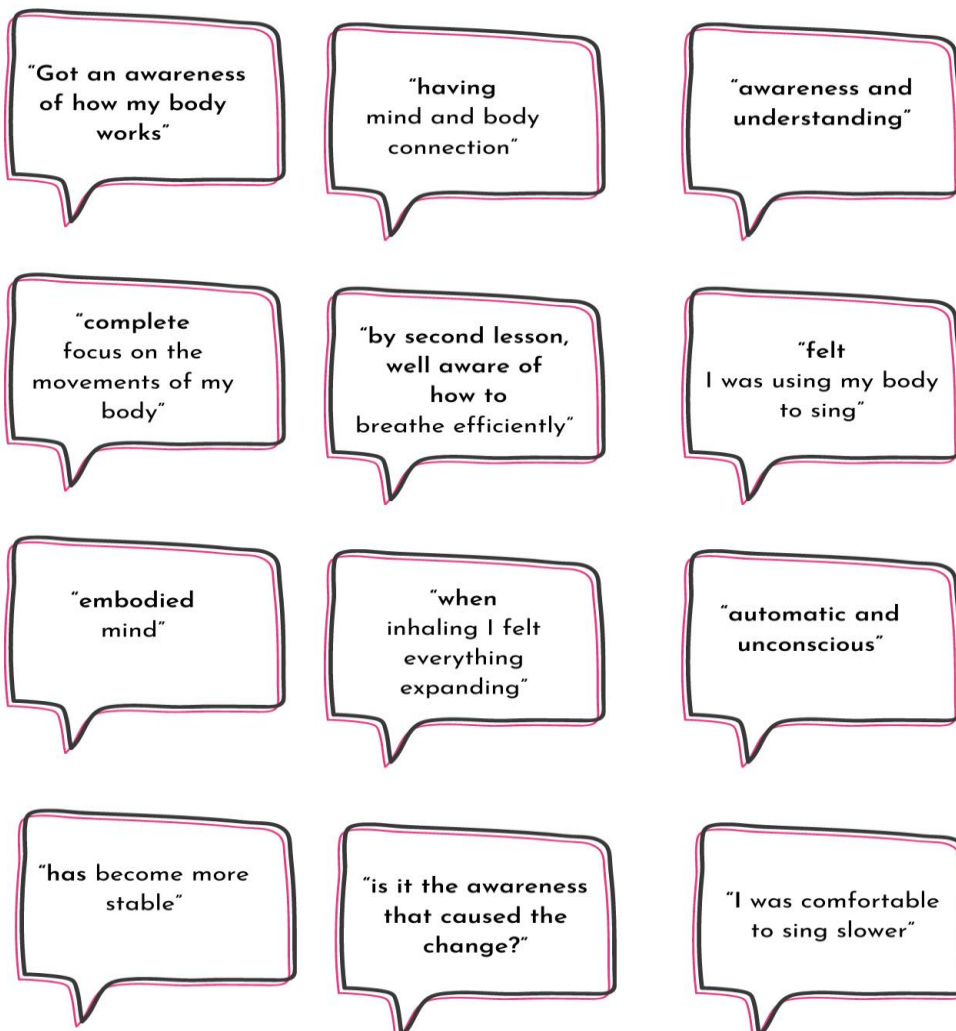
Intense focus in performance allows for a unification of mind and body, allowing the individual to perform at fullest capacity, with the body moving effortlessly and practiced technique occurring almost automatically (McCarther, 2018).

- **Aware of a new awareness**

The participants became aware that the attention they paid during the lessons had a major role in the changes they felt in their singing and their vocal instrument. Attentional processing of perceptual or sensory information or being in the moment without judgment, comment or conclusions is crucial for acquisition of implicit memory and learning (Verdolini, 2000).

The second lesson with the participants, which was a **somatic learning lesson**, proved to be effective in guiding the singer's attention and increasing their kinaesthetic awareness (Corrigan, 1997).

Some of the phrases used were:



Attention to an external target or effects of the movement is considered to be better while learning complex motor skills for effectiveness and efficiency, as attention to body mechanics could interfere with the learning (Wulf, 2013). Although the participants paid attention to their body movements during the somatic lesson, these were distinctly different from trying to control a muscle group. The Feldenkrais ATM **exercises involve the part of the nervous system that control movement and not done through conceptual consciousness or ‘thinking’**, enabling changes to be retained and amplified. Thus, by reprogramming the functioning of the nervous system, singing problems which arise from faulty learning, injuries and structural problems can be overcome (Nelson and Blades-Zellar, 2002, p.4). In a participant's words, *“the second lesson solidified the first lesson”*, where the ‘know how’ of the skill was elucidated and enriched by the ‘know that’ (Helding, 2009).

- **Role of augmented feedback in the learning process**

Heightened kinaesthetic awareness seems very important in the process of learning, **because it forced the singer to rely on their cognition when teacher feedback was withdrawn or delayed**. Thus, providing blocked feedback forced the learners own processing to activate (Verdolini, 2000).

When asked what they focused on when teacher feedback was delayed or not given, some of the replies were:



When the student was paying attention and was really aware of what they were doing, then feedback was provided in the form of further attention guiding questions.

- **Autonomy in learning**

Singers seem to learn best when the work is collaborative and **empowers the student to be independent**. This way, the teacher can also be confident that the singer would be able to guide themselves during individual practice between lessons. Having considered the importance of practice in the learning of a motor skill (Helding, 2013), it seems vital that the student learns beforehand what needs to be practiced later because no amount of trying or practicing can help a singer whose somatic organization is inefficient (Gilman, 2014).

When asked about their practice sessions between the two lessons of the study, singers responded thus:



Singers had **earlier noted** that they *“noticed only when someone pointed things out”* and *“asked other experienced singers for exercises”* or *“waited for others to give me feedback”*.

Thus it seems vital to provide blocked and delayed feedback (Verdolini, 2000; Holding, 2008) in order to activate the singers' cognition (Verdolini, 2000) so that the participant can effectively guide themselves during individual practice sessions.

Teacher Reflective Journal coding analysis

Through the study process I maintained a reflective journal to record my thoughts and feelings. I used the content to explore any patterns which came up and the following themes were predominant during the study process.

- **The importance of providing movement options to the students and guiding their attention**

During the lessons, it became apparent that the singers **had habituated movement patterns** (Gilman, 2014, p. 4). With regard to the first lesson, where the singers provided with analogies, setting of an external target and multiple trials, I noticed that the participants had *“limited idea of what to pay attention to”* and *“needed to be guided”*. I had also noticed that the singers *“have a hard time getting out of their own way”* (Gilman, 2014, p.16) and had “subjective attention to what they were already used to”. One of the participants had a frustrating first lesson where the *“lesson was messy but packed with learning”* where he *“could neither go back to his old pattern, nor do the new habit easily”* (Holding, 2008). I've noted that the participant “had been assured that this is a regular happening in the learning process” (Holding, 2008). As a teacher *“I felt almost bad for the singer who was trying really hard to get it right but was unable to sense what I could clearly see”* (Gilman, 2014, p.4).

In contrast, **the second lesson seemed to be easier and pleasurable** for the singers, where somatic movement options were provided. *“Same lesson helped all the singers”* and their *“nervous system learnt what was needed”* (Gilman, 2014, p.13) as the *“somatic lesson seemed to be the teacher”*. Once the singer's “realized” and “experienced” a change (Corrigan, 1997), I felt *“I could withdraw my feedback”* and *“allow them to use their cognition”* (Verdolini, 2000). The **second somatic lesson “solidified the first lesson”** and **“allowed them to explore movement options which cannot be described using words”** (Gilman, 2014, p.9). While the singers consciously focused on the vocal task, the ATM exercise involved the part of the nervous system that controls movement and not done through conceptual consciousness or ‘thinking’, enabling changes to be retained and amplified (Nelson and Blades-Zeller, 2002, p.6).

The following stood out for me as a summary of my reflective journaling:

- *“the power of providing choices to the student”*
- *“working in collaboration with the student”*
- *“respecting the students perspective”*

My study showed **that somatic learning could provide movement options for a singer** and help to redraw the somatic and vocal image map, thus helping to eliminate habituated body patterns (Gilman, 2014) which cannot be done using motor learning principles alone. When **Somatic Learning preceded Motor Learning of vocal tasks, it can be a powerful intervention tool in motor learning** (Buchanan and Ulrich, 2001; Feldenkrais, 1972, 1981; Lundblad, Elert and Gerdle, 1999; Gordon, Goldberg, Rockwell and Netsell, 2013).

Conclusions

Looking back on the development of this project, it has been an exciting time of learning and discovery for me as a teacher and a singer. My personal teaching journal entries show a marked shift to a more student-cantered method of lesson delivery. Although there were a few confusions initially on setting my research question in place, I feel things went smoothly after that. I feel that if I had set my research question clearly a little earlier, then I may have had more time to collect data in the form of retention tests. But I still feel that the results which this study has shown may prove useful to the wider singing teaching community.

Using Driscoll's three questions “what”, “so what” and “now what” (Driscoll, 2007), I would like to summarize my research study:

“What?”

Singers learn best when the process is collaborative and when they are given movement choices in the form of somatic re-education, before moving into the Motor Learning stage of Vocal Skill Acquisition where there are repeated trials and use of analogies.

“So what?”

The combining of Somatic and Motor learning principles in the teaching studio would ultimately enhance the long-term retention of skills in a singer.

“Now what?”

I would like to understand somatic learning more and use the knowledge to develop simple lessons which can be incorporated into my studio teaching and can be seamlessly combined with teaching other aspects of vocal technique. If possible I would also like to look into getting certified in any of the Somatic Education techniques in the future.

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Student Number: 1911198

Glossary of terms

Motor learning: Relatively permanent changes in the capacity for skilled movement (Verdolini, 2000).

Somatic Learning: Also called as Embodied Learning. Experiential learning that involves senses, perceptions and mind-body action and reaction.

Cognition: The mental action or process of acquiring knowledge and understanding through thought, experience, and the senses.

Motor Performance: Capturing where the learner stands at a certain point in time along the learning continuum with an aim of being polished and presentable (Helding, 2020, p.99)

Augmented Feedback: Extra information beyond the learner's own fund of inherent information (Helding, 2020, p.129).

Declarative Learning: A process that results in a permanent change in behavior as a result of experience (Helding, 2020, p.74).

Procedural Learning: A process that results in a permanent change in behavior as a result of practice (Helding, 2020, p.74).

Neurotransmitter: a chemical substance which is released at the end of a nerve fibre by the arrival of a nerve impulse and, by diffusing across the synapse or junction, effects the transfer of the impulse to another nerve fibre, a muscle fibre, or some other structure.

Synaptic Connections: Synapse, also called neuronal junction, the site of transmission of electric nerve impulses between two nerve cells (neurons) or between a neuron and a gland or muscle cell (effector).

References

- Baker, S. E., & Edwards, R. (2012). 'How many qualitative interviews is enough? Expert voices and early career reflections on sampling and cases in qualitative research'. National Centre for Research Methods.
- Bergan, C. (2010). Motor Learning Principles and Voice Pedagogy. *Journal of Singing*, 66(4), 457-468.
- Berg, B. L. (2001) *Qualitative Research Methods for the Social Sciences*. 4th Ed. Long Beach, CA: Allyn & Bacon.
- Bjork, R. (1994) cited in Holding, L. (2013). Memory, Hither Come. *Journal of Singing*, 69(3), 337-344.
- Buchanan, P.A. & Ulrich, B.D(2001) cited in Gordon, S., Goldberg, L.R., Rockwell, J.A. & Netsell, R. (2013). Peer Reviewed Article Feldenkrais-based Sensory Movement Technique and Breathing for Voice Production for the Stage. *Voice and Speech Review*, 5(1), 171 - 182.
- Burke, T. (2014). Holistic vocology: a four-part framework for voice training and rehabilitation. *Voice and Speech Review*, 8(2), 217-219.
- Corrigan, M. (1997). Psycho-Physical techniques and their relevance to Voice and Actor Training. In M. & Hampton (Ed.), *The Vocal Vision: Views on Voice by 24 Leading Teachers, Coaches and Directors* (pp. 93-105). New York: Applause.
- Costley, C., Elliott, G. and Gibbs, P. (2010) *Doing work based research*. Los Angeles: SAGE
- Crotty, M. (1998) *The Foundations of Social Science Research*. St Leonards, New South Wales: Allen and Unwin
- Denscombe, M. (2003) *The Good Research Guide for small-scale social research projects*, 2nd Ed, Maidenhead, Philadelphia: Open University Press
- Donlea, J. M., Thimgan, M.S. Suzuki, Y., Gottschalk, L. & Shaw, P. J. (2011) cited in Holding, L. (2013). Memory, Hither Come. *Journal of Singing*, 69(3), 337-344.
- Feldenkrais, M. (1949) cited in Nelson, S.H. & Blades-Zellar E. (2002) *Singing with Your Whole Self: The Feldenkrais Method and Voice*. Lanham, Maryland and London: Scarecrow Press.
- Feldenkrais, M. (1972) cited in Gordon, S., Goldberg, L.R., Rockwell, J.A. & Netsell, R. (2013). Peer Reviewed Article Feldenkrais-based Sensory Movement Technique and Breathing for Voice Production for the Stage. *Voice and Speech Review*, 5(1), 171 - 182.
- Feldenkrais, M. (1981) cited in Gordon, S., Goldberg, L.R., Rockwell, J.A. & Netsell, R. (2013). Peer Reviewed Article Feldenkrais-based Sensory Movement Technique and Breathing for Voice Production for the Stage. *Voice and Speech Review*, 5(1), 171 - 182.

- Gabriele Wulf, Monika Horger, Charles H. Shea. (1999). Benefits of Blocked Over Serial Feedback on Complex Motor Skill Learning. *Journal of Motor Behavior*, 31(1), 95-103.
- Gilman, M. (2014). *Body and Voice Somatic Re-education*. San Diego, CA: Plural Publishing.
- Gordon, S., Goldberg, L.R., Rockwell, J.A. & Netsell, R. (2013). Peer Reviewed Article Feldenkrais-based Sensory Movement Technique and Breathing for Voice Production for the Stage. *Voice and Speech Review*, 5(1), 171 - 182.
- Graf, P. & Schacter, D. L. (1985) cited in Verdolini, K. (2000). Principles of Skill Acquisition Applied to Voice Training. In *The Vocal Vision: Views on Voice by 24 Leading Teachers, Coaches and Directors*. Applause Books.
- Guba, E. G., & Lincoln, Y. S. (1994) Competing Paradigms in Qualitative Research. In N. K. Denzin, & Y. Lincoln, *Handbook of Qualitative Research* (pp. 105-117). Thousand Oaks, CA: Sage.
- Helding, L. (2008). Voice Science and Vocal Art, Part Two: Motor Learning Theory. *Journal of Singing*, 64(4), 417-428.
- Helding, L. (2009). The Missing Brain. *Journal of Singing*, 66(1), 79-84.
- Helding, L. (2012). Choosing Attention. *Journal of Singing*, 68(3), 321-327.
- Helding, L. (2012). The Multitasking Monster. *Journal of Singing*, 68(4), 451-455.
- Helding, L. (2013). Memory, Hither Come. *Journal of Singing*, 69(3), 337-344.
- Helding, L. (2013). Memory, Hither Come. *Journal of Singing*, 69(3), 337-344.
- Helding, L. (2020). *The Musician's Mind*. London: Rowman and Littlefield.
- Indik, L. (2006). Memory and the Skill of Singing. *Journal of Singing*, 62(3), 251-258.
- Jacoby, L. L & Dallas, M. (1981) cited in Verdolini, K. (2000). Principles of Skill Acquisition Applied to Voice Training. In *The Vocal Vision: Views on Voice by 24 Leading Teachers, Coaches and Directors*. Applause Books.
- Jones, E J. (1976) cited in Verdolini, K. (2000). Principles of Skill Acquisition Applied to Voice Training. In *The Vocal Vision: Views on Voice by 24 Leading Teachers, Coaches and Directors*. Applause Books.
- Kincheloe, J. L. (2004) Introduction: the power of the bricolage: expanding research methods. In K. Berry, & J. Kincheloe, *Rigor and complexity in educational research*. Columbus: Open University Press.
- Kleinman, M. (1983) cited in Helding, L. (2008). Voice Science and Vocal Art, Part Two: Motor Learning Theory. *Journal of Singing*, 64(4), 417-428.
- Kollwitz, M. (2016). Breath, tremoring, and performance anxiety: How can Fitzmaurice Voicework's Destructuring address performance anxiety in undergraduate acting training? *Voice and Speech Review*, 10(2-3), 100-120.

- Laverty, S. M. (2003) 'Hermeneutic Phenomenology and Phenomenology: A Comparison of Historical and Methodological Considerations', *International Journal of Qualitative Methods*, 2(3), pp.21-35.
- LoVetri, J. (2009). Essay Somatic Voicework : The LoVetri Method. *Voice and Speech Review*, 6(1), 436-442
- Lundblad, I. , Elert, J. & Gerdle, B. (1999) cited in Gordon, S., Goldberg, L.R., Rockwell, J.A. & Netsell, R. (2013). Peer Reviewed Article Feldenkrais-based Sensory Movement Technique and Breathing for Voice Production for the Stage. *Voice and Speech Review*, 5(1), 171 - 182.
- MacKenzie, N. & Knipe, S. (2006) 'Research Dilemmas: Paradigms, Methods and Methodologies. Issues in Educational Research', 16, pp.1-11.
- Marcus, G. (2004) cited in Holding, L. (2013). Memory, Hither Come. *Journal of Singing*, 69(3), 337-344.
- Maxfield, L. (2011). Application of principles of Motor Learning Theory to the studio voice lesson: effects of feedback frequency on retention of classical singing technique. *Thesis, University of Iowa*.
- Maxfield, L. (2018). Toward an Understanding of Attention and Awareness. *Journal of Singing*, 75(2), 197-200.
- Maxfield, L. (2020). Taking a Beat: Timing in the Age of Online Lessons. *Journal of Singing*, 77(1), 91-94.
- McCarthy, S. (2018). Getting in the Zone, Part 1: Flow and Finding a State of Peak Performance. *Journal of Singing*, 74(3), 329-334.
- McCarthy, S. (2018). Getting in the Zone, Part 2: Attention and Setting Goals. *Journal of Singing*, 74(4), 443-447.
- Merbah S. & Meulemans T. (2011). Learning a Motor Skill: Effects of Blocked versus Random Practice A Review. *Psychologica Belgica*, 51(1), 15-48.
- Mercer, J. (2007). The Challenges of Insider Research in Educational Institutions: Wielding a double-edged sword and resolving delicate dilemmas. Centre for Educational Leadership and Management, University of Leicester.
- Merriam, S. B. (1995) 'What Can You Tell From an N of 1? Issues of Validity and Reliability in Qualitative Research', *PAACE Journal of Lifelong Learning*, 51-60.
- Mills, G. E cited in Hine, G, (2013) 'The Importance of Action Research in Teacher Education Programs', *Issue in Educational Research* 23 (2), Special Issue.

- Morgan, D. (2007) 'Paradigms Lost and Pragmatism Regained: Methodological Implications of Combining Qualitative and Quantitative Methods', *Journal of Mixed Methods Research*.
- Morrison, J. , Kotzubei, S. & Seiple, T (2017). Vocal Traditions: Fitzmaurice Voicework. *Voice and Speech Review*, 11(3), 339-347.
- Nix, J. (2017). Best Practices: Using Exercise Physiology and Motor Learning Principles in the Teaching Studio and the Practice Room. *Journal of Singing*, 74(2), 215-220.
- Nelson, S.H. & Blades-Zellar E. (2002) *Singing with Your Whole Self: The Feldenkrais Method and Voice*. Lanham, Maryland and London: Scarecrow Press.
- Ohrenstein, D. (2000). Reprint Physical Tension, Awareness Techniques and Singing. *Voice and Speech Review*, 1(1), 285-288.
- Peterson, P. H. (2008). on the Voice: Alexander or Feldenkrais: Which Method is Best? *The Choral Journal*, 48(11), 67-72.
- Roediger, H. L. (1990) cited in Verdolini, K. (2000). Principles of Skill Acquisition Applied to Voice Training. In *The Vocal Vision: Views on Voice by 24 Leading Teachers, Coaches and Directors*. Applause Books.
- Rogers, M. (2012) 'Contextualizing Theories and Practices of Bricolage Research', *The Qualitative Report* ,Volume 17, T&L Art. 7, 1-17.
- Rootberg, R. (2000). Peer-reviewed Article Moving Towards Vocal Center: Integrating Laban Movement Analysis and Bartenieff Fundamentals with a Linklater Vocal Warm-up. *Voice and Speech Review*, 1(1), 291-313.
- Rowley, J. (2003) 'Action Research: an approach to student work based learning', *Journal of Education + Training*, 45 (3), pp. 131 – 138.
- Saldaña, Johnny (2016) *The Coding Manual for Qualitative Researchers*, Sage Publishing Inc.
- Schacter, D. L. (1987) cited in Verdolini, K. (2000). Principles of Skill Acquisition Applied to Voice Training. In *The Vocal Vision: Views on Voice by 24 Leading Teachers, Coaches and Directors*. Applause Books.
- Schlaug, G. (2009). Music, Musicians and Brain Plasticity. In C. a. Hallam (Ed.), *The Oxford Handbook of Music Psychology*. Oxford: Oxford Press.
- Shewell, C. (2009). *Voice Work: Art and Science in Changing Voices*. Chichester, West Sussex: Wiley-Blackwell.
- Snyder, B. (2009). Memory for Music. In C. a. Hallam (Ed.), *Oxford Handbook of Psychology*. Oxford: Oxford Press.

Stringer, E. T. (2008) *Action research in education* (2nd ed.). New Jersey: Pearson.

van Manen, M. cited in Lavery, S. M. (2003) 'Hermeneutic Phenomenology and Phenomenology: A Comparison of Historical and Methodological Considerations', *International Journal of Qualitative Methods*, 2(3), 21-35.

Verdolini, K. (2000). Principles of Skill Acquisition Applied to Voice Training. In *The Vocal Vision: Views on Voice by 24 Leading Teachers, Coaches and Directors*. Applause Books.

Walker, M. (2017). *Why We Sleep: The New Science of Sleep and Dreams*. Great Britain: Penguin Random House.

Whitehead, J. and McNiff, J. (2006) *All You Need to Know About Action Research*. London: Sage.

Wulf, G (2013) cited in Holding, L. (2020). *The Musician's Mind*. London: Rowman and Littlefield.

Appendices

Appendix 1

Consent Forms

Informed Consent Form for Anupa Paul project

I, the undersigned, confirm that (please tick as appropriate):

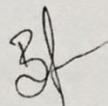
1.	I have read and understood the information about the project, as provided in the information letter attached _____.	☒
2.	I understand that participation involves attending two singing lessons with the researcher over Zoom, interviews and retention tests which will be video recorded, answering written questionnaires and if necessary, written clarification regarding any of the above.	☒
3.	I have been given the opportunity to ask questions about the project and my participation.	☒
4.	I voluntarily agree to participate in the project.	☒
5.	I understand that I can withdraw at any time without giving reasons and I will not be penalized for withdrawing, neither will I be questioned on why I have withdrawn.	☒
6.	The procedures regarding confidentiality have been clearly explained to me.	☒
7.	I understand that I will not benefit directly from participating in this research.	☐
8.	I understand that the recorded video lessons, interviews, retention tests, signed consent forms and questionnaires will be retained by the researcher until the results of the research study have been published.	☒
9.	I understand that the transcript of the interviews and lessons will be retained by the researcher for 2 years after the results of the research study have been published.	☒
10.	The use of the data in research, publications, sharing and archiving has been explained to me.	☒
11.	I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the data and if	☒

	they agree to the terms I have specified in this form.	
12.	Select only one of the following: ☐ I would like my name used and understand what I have said or written as part of this study will be used in reports, publications and other research outputs so that anything I have contributed to this project can be recognized. ☐ I do not want my name used in this project. Please use my initials instead.	☒
13.	I, along with the Researcher, agree to sign and date this informed consent form.	☒

Participant:

Blesson M Joseph

Name of Participant



Signature

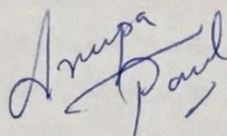
12.12.2020

Date

Researcher:

Anupa Paul

Name of Researcher



Signature

12.12.2020

Date

Informed Consent Form for Anupa Paul project

I, the undersigned, confirm that (please tick as appropriate):

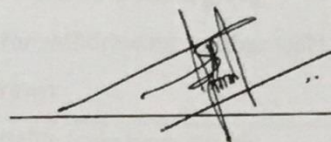
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Participant:

Dr. Sajeev John Jacob

Name of Participant



Signature

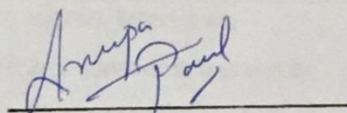
12-012-2020

Date

Researcher:

ANUPA PAUL

Name of Researcher



Signature

12.12.2020

Date

Informed Consent Form for Anupa Paul project

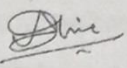
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Participant:

OLIVE ABRAHAM



12.12.2020

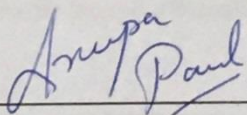
Name of Participant

Signature

Date

Researcher:

ANUPA PAUL



12.12.2020

Name of Researcher

Signature

Date

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13.	I, along with the Researcher, agree to sign and date this informed consent form.	☐ ✓

Participant:

Reshma Elizabeth Thomas

Reshma

02.01.2021

Name of Participant

Signature

Date

Researcher:

ANUPA PAUL

Anupa Paul

12.12.2020

Name of Researcher

Signature

Date

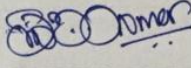
Informed Consent Form for Anupa Paul project

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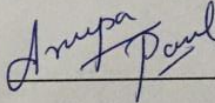
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13.	I, along with the Researcher, agree to sign and date this informed consent form.	☒

Participant:

JISO JACOB THOMAS  12/12/2020

Name of Participant Signature Date

Researcher:

ANUPA PAUL  12.12.2020

Name of Researcher Signature Date

Appendix 2

Pre-Lesson Questionnaires

Participant 1 Pre – Lesson Questionnaire

Age 28

Sex : M

Please answer these questions for me. Use your own terms and explanations. There is no word limit



thank you!

1. What do you understand by the term vocal technique?

Vocal technique is the process in which a person uses his or her vocal instrument, while singing, to effectively and correctly sing.

2. What does the word learning mean to you with regard to vocal technique?

Adapting proper ways of singing and correcting flawed techniques in various singing styles.

3. How do you usually learn a new vocal skill?

A lot of it from listening to other singers and also from vocal classes.

4. With regard to your singing performance, do you have any concerns related to breath management?

Yes. Very huge concern. Especially comes out while

Studio singing. Where my breathlessness is evident. I feel a lot it has to do with my obesity.

5. What does it feel like to sing a long phrase?

I get a strained unpleasant sound towards the end of that phrase or I would not be able to complete the phrase in full.

6. How do you usually improve your breath management while singing?

Purposely breath. Take good deep breaths.

7. How useful do you think it would be to know how to learn any vocal skill effectively and efficiently?

Very useful. Lack of knowledge would be the reason for improper techniques while singing.

Blesson Joseph

Signature

Participant 2 Pre-lesson questionnaire

Age 25

Sex F

Please answer these questions for me. Use your own terms and explanations. There is no word limit thank you!

1. What do you understand by the term vocal technique?

. The different ways of sound production, breath management and the like.

2. What does the word learning mean to you with regard to vocal technique?

Practical applications in singing.

3. How do you usually learn a new vocal skill?

Listening to different songs and attending training sessions.

4. With regard to your singing performance, do you have any concerns related to breath management?

Yes. While singing long phrases.

5. What does it feel like to sing a long phrase?

Difficult. Won't be able to sing the whole phrase.

6. How do you usually improve your breath management while singing?

Warm ups, breathing exercises.

7. . How useful do you think it would be to know how to learn any vocal skill effectively and efficiently?

Always very useful. Would be able to understand what exactly we should do and how to do it.

Reshma Thomas

Signature

Participant 3 Pre Lesson Questionnaire

Age: 25

Sex: M

1. What do you understand by the term vocal technique?

Vocal technique is the method we use to deliver the musical notes with ease and precision.

2. What does the word learning mean to you with regard to vocal technique?

Learning to improve our singing style and breath control in order to sing effectively

3. How do you usually learn a new vocal skill?

By practising it on a daily basis.

4. With regard to your singing performance, do you have any concerns related to breath management?

Yes. I lose breath quite often while singing. There are frequent pauses which I need to work on.

5. What does it feel like to sing a long phrase?

I can sing a long phrase but then I tend to lose breath sometimes.

6. How do you usually improve your breath management while singing?

I've a set of breathing exercises that I do.

7. How useful do you think it would be to know how to learn any vocal skill effectively and efficiently?

It's really useful for anyone who loves to sing and I'm one.

Sajeev Jacob

Signature

Participant 4 Pre Lesson Questionnaire

Age:27

Sex: M

Please answer these questions for me. Use your own terms and explanations. There is no word

limit  thank you!

1. What do you understand by the term vocal technique?

To get the best quality tone (timbre) out of any instrument, you have to use the instrument the right way. ie. You should be able to easily manoeuvre the instrument. If you learn the proper vocal technique, one will be able to sing very easily in the right timbre or the quality of sound will be pleasing to the ear.

2. What does the word learning mean to you with regard to vocal technique?

The vocal chords are a set of muscles; so to get the muscle memory and to teach the muscles to do their work correctly. Learning in vocal technique means to teach the vocal muscles and the whole body to work yhe right way.

3. How do you usually learn a new vocal skill?

I try to understand what the new skill is and try to change it an excercise, then practice the excercise over and over again.

4. With regard to your singing performance, do you have any concerns related to breath management?

Personally, the main issue that I face is to get my breath in the higher register, especially with head voice.

5. What does it feel like to sing a long phrase?

Feels very satisfying.

6. How do you usually improve your breath management while singing?

Breathing exercises like singing a vowel for maximum time.

7. How useful do you think it would be to know how to learn any vocal skill effectively and efficiently?

It will be very liberating. As a singer, if you know how to learn the skill the right way, one can be a better singer.

Olive Abraham

Signature

Participant 5 Pre Lesson Questionnaire

Age 35

Sex M

1. What do you understand by the term vocal technique?

Vocal technique for me is the tactic used while singing to make one's voice feel more appealing.

2. What does the word learning mean to you with regard to vocal technique?

Learning in vocal technique is practicing singing on a regular basis such that a person could incorporate techniques and emotions of a song in a balanced way.

3. How do you usually learn a new vocal skill?

Even though I got chances to learn some vocal skills from certain talented choristers, the Internet is a major source for me these days to learn new vocal skills. However, I have felt that choosing exercises according to one's range and style of singing is important, and hence it is very important to get advice of an expert vocal trainer.

4. With regard to your singing performance, do you have any concerns related to breath management?

Breath management in my opinion is the factor that should be given utmost importance as it is awkward to break words in a song due to insufficient breath. I have had many disappointing experiences due to improper management of breath, which I believe could be sorted out with regular voice training.

5. What does it feel like to sing a long phrase?

It would be a challenge that I am happy to meet.

6. How do you usually improve your breath management while singing?

During practice sessions, I usually mark areas in the music sheet where I might face a difficulty in managing breath, so that I could care to take enough breath to complete the portion without break.

7. How useful do you think it would be to know how to learn any vocal skill effectively and efficiently?

A major constraint in learning vocal skills in my opinion is that the lessons are not that captivating for amateur singers. By contrast, if an amateur find the lesson effective and efficient, it can sustain the interest in him to learn music and grow himself into a finer singer.

Jijo Jacob

Signature

Appendix 3

Lesson transcripts

Participant 1

Blesson – 16/12/2020

Me: Hey!

B: Hello!

Me: Thank you for being part of this study. I'm really excited about it.

B: You're welcome.

Me: So this morning thank you for filling up the errr questionnaire for me. So..one of the questions that I'd asked was about your errr, how you learn a new errr, technique and you'd said that it's through a lot of listening to a lot of singers and through vocal classes. Yeah?

B: Yeah

Me: Do you wanna tell me anything more about that?

B: Ummm, so one of the things I try to do is imitate.

Me: Okay

B: I don't know if that's good or bad. Err, but see what I mean is, when you listen to a lot of different, err musicians, you get a lot of different err ways or ideas to sing. So that's what I meant by listening to other musicians.

Me: Okay. Okay. Yeah. And do you, errr, when do you know that you have learnt a particular skill? When do you know that, yes, this is in me now. When do you know that? (pause) Have you ever thought about it?

B: No

Me: Okay. No problem. Erm, so..

B: Ummm

Me: Yes, tell me.

B: I think if you're singing a particular style and if someone gives you a feedback that okay I noticed that in your singing, and then maybe I realize that, you know, I was trying to kind of put into action what I learnt.

Me: Okay okay. When it comes to breathing, I'd asked if you had any concerns related to breath management and you'd said that it was a very huge concern for you. So how do you think it affects your singing?

B: So a couple of things are, first one, you know, while singing a phrase, towards the end I go off key if I don't have breath. I've noticed that. And I think that's one of the main reasons why I tend to, errrr slide down at times when I sing. Not having a proper breath management, breath control. That is one thing I've noticed and also erm, the quality of the singing goes down at the end very much if I don't have breath.

Me: Yeah yeah

B: That's a couple of things I've noticed.

Me: Yeah. And you also said it has a lot to do with your obesity?

B: Haha yeah.

Me: Haha expand more about that.

B: Ummm so, I think it has been a couple of years since I gained a bit of weight.

Me: Okay

B: Not too obese, I mean, it's...it's a. So I felt a difference you know. Before when I was not as much obese as I was now, I could sing better or I could errr errr, I could have more proper breathing, I could sing longer phrases. So that's the difference that I've noticed.

Me: Yeah. And has your fitness regime, has that changed over the last couple of years?

B: Am I?

Me: Like your fitness regime, what you do to exercise or maintain your health, has that changed over the last couple of years?

B: Yes! Ummm, till a couple of years back I used to go and play badminton everyday in the evening.

Me: Okay.

B: Since I shifted houses, so that was not possible.

Me: Okay

B: That had a very drastic effect. And so, since I was preparing for exams and sitting at home mostly. It was just sitting and err studying and eating and sitting and...there was no physical activity. Especially the last one year there's been absolutely no physical activity. Since March.

Me: Okay. Ummm. And how is it that you now prepare yourself to sing? So when you are practicing or when you are preparing for a performance, do you have a certain regime that you follow? Anything that you do?

B: In terms of vocal exercises?

Me: Yeah. It could be anything.

B: So if there is a major concert coming up I try to, since I have acute tonsillitis, I try to avoid cold, drinking cold water, drinking ice and all, cos it gets flared up very easily for me.

Me: Yeah

B: I've noticed that, so I avoid that and another thing is, before concerts in terms of vocal exercises it's all lip trills. I get tensed, so if I have a solo in that concert and if it's not within my range, I have a fear of it. The only thing I try to do is lip trill it, errr before the concert.

Me: Cool. And is that how you practice as well?

B: Like?

Me: What is your practice like, your singing practice? Do you practice not just before a performance, but to keep your vocal technique going?

B: Yeah so I practice with my group mostly. Individual practice is very less.

Me: Individual practice is very less you said?

B: Yeah

Me: Cool! Awesome so...ummm.

At the beginning of the lesson, just as a reference we'll do two things, one is erm just singing the first verse of the hymn 'Abide with me'. So you have the lyrics with you. I'll give you the key or if you have your keyboard with you, its on Eb.

B: Can you give it?

Me: That's your pitch.

B: Can you play that again?

Me: Could you hear it?

B: Yeah. Shall I sing?

Me: Yeah

B: *sings*

Me: Thank you. Nice. So keep this at the back of your mind, how it felt to sing it. So your general ease of singing. How it felt. Then keep in mind how it felt to breathe, how comfortable you were when you were singing. Just in general, your intonation was. Just keep that at the back of your mind. Okay, take like a snapshot and put it away. We'll come back to this at the end of the lesson.

B: Okay

Me: Now I'll give you a note which will be middle C. On a steady beat, so if your beat is (claps) so like the seconds of a clock, roughly, if you imagine that, on that beat on a single tone count numbers, so I'll do it for you (demonstrates). And see what is the maximum you can get to on a single exhale.

B: counts to 12

Me: Good. So I've made a note of that. So we'll work on your song now. So you have a song that you'd like to sing for me?

B: Yes. It's 'O, Holy night'

Me: Okay

B: Sings

Me: Great! So how did that feel to sing that song?

B: It was a bit strained. Breathing issues were there. At the end of the phrases I felt like maybe I was going off key?

Me: Okay..

B: It was mostly strained. It wasn't pleasant singing. I also have a problem with higher notes, so...

Me: Okay awesome. So we will keep that and work on it towards the end of the lesson. So now could you sit in a nice comfortable way. If possible move your laptop screen down a little bit so I can see you and maybe move back a little bit? Yeah. So come forward on your chair so you're not

leaning back and neither are you slumped forward. And in this position let's go back to the second task that we did, that is on a single note counting the numbers yeah? I'll give you your note.

B: counts to 25

Me: try it again.

B: counts to 15

Me: try it again

B: counts to 16

Me: *few seconds later*

Before you try again, pay attention to what you are doing, what is happening, generally what you are doing...

B: counts to 20

Me: try it again

B: counts to 20

Me: try it again

B: counts to 21

Me: *few seconds later plays the note middle C*

When you were paying attention now, was there anything that you were aware of?

B: I was able to sing louder, though I was paying attention to not unnecessarily wasting my breath. Because I think when I'm not aware I breathe out more unnecessarily? When I kept a check on that, I felt I could hold on.

Me: Cool, so with regard to your pitch...*hums middle C*....

B: I think I went down.

Me: Yeah I think about a semitone. Try again.

B: Counts to 21

Me: try again

B: Counts to 22

Me: try again

B: Counts to 24

Me: *few seconds later plays middle C*

That's the pitch. I think pitch-wise you are better.

B: Yeah

Me: And your number has improved, 24 now.

B: Yeah

Me: So shall we set a target of a particular number that you'd like to reach? How about 30? Yeah try again.

B: counts to 24

Me: try again

B: Counts to 24

Me : try again

B: Counts to 27

Me: *few seconds later*

how was that?

B: Getting better. Reaching most of the target.

Me: what are you aware of now?

B: Breathing. And staying on pitch

Me: So now think of your torso as a six sided box. Without singing now breathe normally, notice which of those 6 sides are moving and which of those 6 sides are not moving when you breathe.

What do you notice?

B: So the only part that is not moving is my spine at the back.

Me: okay, are your sides moving?

B: Sides from here are moving

Me: Hip down?

B: Yes

Me: So is your entire back not moving? Just notice

B: So my back is stiff.

Me: Is this an issue that you always have, a stiff back? Or is it like today?

B: I get back pains while standing for a long time. I haven't noticed this yet. This is the first time that I'm noticing that when I breathe my back is stiff.

Me: Yeah and what about the other sides? The rest of 6 sides are moving?

B: Yeah I felt so

Me: Whole of the front, top and bottom?

B: Yeah, mostly bottom, top not that much, at times yeah it is moving.

Me: Okay let's try something. So the sides which are moving when you breathe now move them even more, so exaggerate it.

Let that go and breathe normally and notice has anything shifted.

B: Breathing more, more air...when I exaggerated.

Me: Okay now breathe normally and see what happens

B: Back to my old way, my abdomen is moving and my sides. My back is still stiff.

Me: Yeah now the sides which are moving, stop that and the sides which are not moving use that to breathe. So if your front is moving a lot, then don't use your front, use your back to breathe. Take care that you don't hurt yourself. Now breathe normally and notice what's happening now with the 6 sides.

B: There's a slight movement in the parts that were earlier stiff.

Me: Yeah. Now think of the 6 sides again and pay attention to what's happening in those 6 sides.

B: There's a change. It's not as stiff as before (holding lower back).

Me: Yeah cool and let's go back to our task. This time pay attention to those 6 sides as you are breathing.

B: counts to 28

Me: try again

B: Counts to 32

Me : try one more time

B: Counts to 30

Me: *few seconds later plays middle C*

And what are you noticing now?

B: I purposefully tried to take more air in, I made sure that all my sides were moving and I tried to stay on pitch. And I had my target in mind. I was focused more.

Me: What I noticed is that diction has become more smoother, has evened out and is even till the end of the phrase, which is good. I will change the pitch now to see what is happening (Plays Eb)

B: counts to 23

Me: try again

B: Counts to 28

Me : try again

B: Counts to 31

Me: *few seconds later plays Eb.*

Yeah that was the pitch. So again bring your attention back to the 6 sides. Repeat what we did. Exaggerate what's moving more and now breathe normally couple of times and the sides which are not moving much, it could have changed from before so notice what's happening now. \

B: Difference from before. My back is also moving now while breathing normally.

Me: Is your entire back moving?

B: bottom half

Me: Okay so I'm not sure if you did it before, but now when exaggerating the parts which are moving, exaggerate the bottom half of your back too.

Now breathe normally. Now the parts which were not moving, move only that to breathe. Let go and breathe normally now. And one step more, one inhale move the parts which are moving really well. Next inhale you are moving the parts which are not moving really well. So you're alternating yeah? And when you've done that 2 or 3 times, just breathe normally.

Good. So we'll try again. So pay attention to what's happening.

B: counts to 32

Me: try again

B: Counts to 30

Me : try again

B: Counts to 32

Me: *few seconds later plays Eb*

Yeah so your minimum is now the target that we set and you have begun to cross the target. Anything you want to say at this point?

B: Being more focused helped. Then making sure that the six parts and the target in mind helped

Me: Now imagine your torso is a big beach ball and while you are singing, keep that beach ball in mind and while you are singing, the beach ball is evenly deflating. When you finish, the beach ball is inflated again. So think of a beach ball deflating uniformly. Keep that image in your mind and sing.

B: counts to 28

Me: try again

B: Do I have to inhale again after counting?

Me: Yes. Just let it fill with air again.

B: Then do I start counting again or just stop?

Me: Just stop. So your one deflation is one exhale.

B: Okay got it. Counts to 23

Me : try again

B: Counts to 31

Me: *few seconds later plays Eb*

So what did you notice and what was your attention drawn to?

B: Evenly breathing out.

Me: How did that help or not help? What do you think?

B: I think it was the second time. The first time I wasn't completely focused. So the second time when I was focused I could reach my target.

Me: Yeah so let's try it again.

B: counts to 31

Me: try again

B: Counts to 31

Me : try again

B: Counts to 31

Me: *few seconds later*

That was very consistent. You managed to keep it like that..

So how did that bring to your awareness anything about your breathing? What did you learn from this whole exercise that we did?

B: The deflation exercise or the counting exercise?

Me: The counting exercise.

B: I felt a huge difference from my initial singing it was unfocused and I had no target and also I had no proper breathing. The deflation put a picture in my mind of how my breathing should be. The beach ball when it lets the air out, it does so evenly. I had that in mind. It helped to reach my target.

Me: So shall we try your song again? Before that we'll do one verse of Abide with me to see where it is now.

B: Sings

I felt a huge difference. I was able to connect lines, rather than breaking in between. The end especially 'the darkness deepens Lord with me abide' ...that's usually a part where it goes high I tend to, my voice tends to go off key. But it was clear. I felt it was better this time.

Me: Yeah that was really nice. It was a really nice legato line. And your words were really nice and clear as well. I didn't think you were going to break anywhere. I felt that you would just sing till the end, which you did. Nice, let's sing your song now and see how that has changed.

B: sings 'O Holy Night'

How was it?

Me: Beautiful! You were hitting your high notes like....you were connected, your lines were beautifully legato, your pitching was on point. There was no problem. I couldn't sense any strain in your higher notes. I felt it connected beautifully and the last line, the previous time I think you didn't have the confidence to go up to that high note. But now you knew you were gonna go. So you just did it and it went.

B: So one thing I noticed was, to add to that. So last time I was very tensed about my breathing, I was tensed about my pitching. This time when I was aware of my proper breathing, I knew I was confident enough to try new things. And that's why I could easily take high notes. That was evident for me.

Me: Yeah I felt you really got into the song as well. You were enjoying the song rather than being distracted by anything else.

So if you said 'this is one of the main takeaways for me, what I learnt about my voice, my singing' what would it be? What have you learnt?

B: Having proper techniques of singing, especially on the breathing side, improves not only the singing but also the whole product, whole output of what you're getting. I felt that that was a main difference. Just focusing on one aspect made this much difference. And I think focusing on other aspects of singing can bring tremendous difference.

Me: So how do you think this particular learning is going to come into your regular singing or practicing for your performances? How would you bring it in? How do you intend to bring it in?

B: I'm going to be very aware of my breathing. More focused on that and if that's proper I know that what I sing will be different to what I was singing earlier. So I'm gonna purposefully focus on how I'm breathe, what is moving. Having in mind that I achieve my target.

Me: Yeah basically you are paying attention. So in the beginning of the lesson I asked how is it that you notice things about your vocal technique, that usually when people point it out to me, that's when I know that something is happening. But now, you are aware. You know about your body and how it works and how do you think that is making a difference for you?

B: It's easier if I know what I'm doing is wrong or correct and if I correct it myself, it's easier and it will be more effective. So a knowledge of that is more easy..

Me: Yeah absolutely.

B: Good. So do you have any questions before we finish the lesson?

Me: ok good, So I will stop the recording now.

Lesson 2 transcript – Blesson

Me: Hi!

B: Hi!

Me: So we met last Wednesday and today is Tuesday. So what have you been, erm, noticing since the last lesson? Anything that you want to talk about?

B: Errr so, I've been working on what we discussed. And ummm, when I do my...so I've started, even though it's not regular, I've started having personal you know, practice sessions. And I've been thinking about what we discussed, mainly breathing and my posture. Yeah, that's what I've been doing.

Me: mmm hmmm! So you mean to say you've actually started practicing now?

B: Yeah! On my own.

Me: Yeah! So what do you do in your practice sessions? Could you explain?

B: So the last week what I've done is mainly what we worked on.

Me: Mmm Hmmm

B: Keeping the posture correct, the 6 sides that we discussed everything. Practicing everything and achieving the target that was set. That's the only thing I've been working on for now.

Me: Yeah. And by doing this have you noticed anything in your voice that has changed, anything in your awareness that has come up over the last week?

B: In terms of voice I feel like I've been able to sing on pitch. That was something I had an issue with especially because of the lack of breath, because my breathing wasn't proper..

Me: And you are noticing that that has become better?

B: It has improved yeah.

Me: Nice. Let's go into the first reference. I'll give you the same note. Just count and let's see where it is now.

B: counts to 33

Me: yeah. So the last time that you finished...and the first time that you did..you'd done 12 I think...and then during the lesson it went up and down a lot and finished at 32. Now it's come to 33! Now let's do Abide with me and see how that is, how that feels...

B: sings.

Me: Yeah. How did that feel?

B: It felt good. Much better than the first time. I still remember the lack of breath. Same also in the first stanza, but it was better.

Me: Yeah nice. So you want to sing O Holy Night? So have you been working on this song during your practice sessions?

B: Yes.

sings

Me: Nice. Just keep that in mind okay?

B: Okay

Me: Now sit in a nice symmetrical way. So sit in such a way that you are not hunching forward or leaning back. Are you able to hear me clearly?

B: No. It's a bit low. Yes now it's better.

Me: Sit in a symmetrical way so that your feet are flat on the ground. And find your sitz bones. Are you able to find them? Can you feel your sitz bones?

B: I'm actually on a cushioned chair. Can I change that?

Me: Errr is it a very highly cushioned chair?

B: Yeah It's a bit cushioned.

Me: Okay you can change it if you want to. Otherwise if you just put your hand under your seat and just sit down. You'll be able to feel the bone. Yeah so that's your sitz bone. You should be able to feel it even on the cushion. So once you find it, you can move from side to side and you can feel yourself shifting on the bone.

And in this position sense where your diaphragm is. So err, during the exercises that I tell you this class, if it helps you to pay attention you can close your eyes. Okay? So get a sense of where your diaphragm is in your torso. Get a sense of its size and also where it is located.

B: Yes

Me: Also sense your ribs, as you are breathing. And also your sternum. So your sternum, if you see the collar bone, it sort of meets there, then under that is your sternum going all the way down. So get a sense of your ribs and sternum as you breathe.

Again, be aware, pay attention to what's happening and count.

B: counts to 31

Me: one more time

B: counts to 33

Me: Now using your fingers, try and now find the lower edge of your ribs. Now trace the ribs all through the front and all through the back. Find where it curves up and feel all the way down and feel all the way around. So you can actually like really touch your ribs, nothing will happen. And feel the back..all the way to the spine where it is attached. And come all the way from the back to the front again.

B: Yeah

Me: Okay. Now your diaphragm, the edge of the diaphragm is actually attached to the lower edge of the ribs. So where you touched now is where the diaphragm is attached all around. How is diaphragm is shaped. The edges are attached and it raises up like a dome in the middle. I'm sending you a picture on your whatsapp. See how the diaphragm is attached and raises in the middle. So if this is where your diaphragm is attached, then where do you think is the dome?

B: 10 cms above?

Me: Yeah so where would that be? can you show me with your hands? A little higher actually. So if your ribs meet there, a little higher yes. So if you interlace your fingers and keep your hands there, if

you breathe in, it comes down and if you breathe out, it goes up. So when you breathe in, your ribs are gonna come out as your diaphragm expands and then... So you can actually let go of your hands and sense your diaphragm moving inside. Get a sense of that. And notice your breathing now. How are you breathing now?

B: It is more steady.

Me: Okay. So notice that, pay attention to that and count again.

B: counts to 26

Me: one more time

B: counts to 32

Me: What did you notice then when you were counting?

B: I think the first time I slowed down, I was not in tempo...

Me: Yeah that aside, what did you notice about what was going on?

B: My diaphragm, I focused on that...

Me: Yeah and could you sense it moving ?

B: yes

Me: So next thing, let's try this. So your diaphragm is here and your lungs are on top of that. Imagine that your lungs are like two balloons, like lung shaped balloons, one on your right side and one on your left side. So in the next few breath cycles, imagine that you are filling the right balloon with air. Only the right balloon.

Now breathe normally and notice the difference between the right side and the left side.

Now fill the left balloon with air. Ok now breathe normally.

And now fill both the right and the left balloon with air.

Okay..Breathe normally. Count.

B: counts to 15, coughs....Sorry!

Me: It's okay try again.

B: counts to 34.

Me: Do you want to try it one more time?

B: counts to 35

Me: So what's happening now? What are you able to sense? What's coming to your attention?

B: I'm able to breathe more. When I'm aware I'm able to intake more breath and that allows me to sustain more breath.

Me: Yeah. And what about your voice? Are you noticing anything about that?

B: No

Me: Your speaking voice has become louder.

B: Singing has also become louder?

Me: For some reason your voice is, the audio is dipping and going. I think the mic is picking things up a little weirdly. So you are counting numbers, I can see your mouth moving but the numbers dip and then suddenly I can hear you again. So I'm not able to track that. Can you move your laptop screen up a little bit? You had moved it down. Yes let's see if that helps. But your speaking voice has become louder yeah yeah.

Ummm now let's try something else. Breathe again. Be aware of the balloons filling with air and your diaphragm moving. Cross your arms in front of you and continue breathing. Pay attention. Notice what's happening. Put your hands down. Notice anything?

B: When my arms were crossed, I felt a weight downward. When it was filling with air, I could sense that a lot of body parts were filling with air. As in, lot of spaces that were getting filled.

Me: Yeah nice. Now lift your right arm up and breathe and notice what is happening. Yeah? Put your arm down. What could you feel then?

B: That was a bit harder to breathe.

Me: And what did you sense was moving when you lifted up your arm?

B: My shoulder was moving up and down and my arm was moving up and down.

Me: Now lift your left arm and breathe and notice what is happening as your breathe. Try to breathe normally..

B: My arm is moving.

Me: yeah yeah what else? If you are tired you can put your hands down.

B: I'm having difficulty breathing with my hands up, I don't know why.

Me: Yes. Well you wouldn't breathe like that. Now put both your hands up. You are on your sitz bones. So for a few breath cycles, move to one sitz bone and breathe and for another few cycles move to the other sitz bone. If you need a break you can put your hands down whenever you want okay? Stay on one side for atleast three cycles.

B: Difficult

Me: Now just breathe normally and see what has happened.

B: A few muscles have become more relaxed.

Me: Mmm hmmm where?

B: *points to shoulders*

Me: Mmmm hmmm. Now let's try one last variation. Put your hands up, it doesn't have to go straight all the way to the ceiling. And breathe. And notice what's happening as you breathe.

B: I felt a pressure here

Me: mmm hmmm

B: I think it was because it was the back of my head. I felt that moving.

Me: Now get a sense of what your normal breathing is like- your diaphragm, your sternum, your ribs, your lung balloons, get a sense of everything. Yeah?

Now count

B: counts to 35

Me: One more time

B: counts to 34

Me: Yeah. How was that?

B: I'm able to intake a lot more air. And I feel lot of my body parts were working now, one's which I didn't consider before.

Me: uh Huh. Which parts? Are you able to sense which parts are moving now, which weren't moving before? Which you hadn't considered before?

B: So I think the earlier notion I had was just the bottom portion of my diaphragm. I mean the lower, after the ribs. That was the only part that was moving before, that I used to breathe with. But now I can sense that...ummm...the balloon was good for me. I felt my lungs were also intaking more air. And err strangely I felt my back was also filling with air. Like the diaphragm in the back portion was also filling with air. That was something new.

Me: Yeah. Could you sense it moving?

B: Yeah

Me: Yeah that's because your diaphragm is attached to the back as well. To your ribs. So when the diaphragm moves, it's a 360 happening. Nice. And how does that feel?

B: It's very good. Very nice.

Me: If I remember right, last class you said that you had a stiff back?

B: Yeah it was very stiff.

Me: And how is it feeling now?

B: It's not stiff at all now. It's very different. Those side exercises you know, made me realize that.

Me: Nice. So let's add some sound to this. So while paying attention to everything, exhale on a ssssss till the end of your breath.

So you are going to do it three times consecutively. When you reach the end of your breath, inhale and start again....

Now add a zzzzz on top of that. So it's an ssssss plus a zzzzz.

B: Once?

Me: Yeah just once. So you're going into an ssss first and then a zzzzz right? The audio is not clear so I'm checking. Now as you're doing that, pay attention to what's happening.

Yeah. Count.

B: Counts to 36

Me: Once more

B: counts to 33

Me: what are you sensing now?

B: It was more easy breathing and it was more easy to count. Ummm, I felt more light and unstressed.

Me: Yeah and when you were doing the zzzz, what were you able to sense was moving?

B: errrr I could feel my diaphragm, also the back portion which I earlier felt was stiff, was moving.

Me: And what is the general sense of your singing now compared to how it was at the beginning of the class?

B: Erm breathing-wise it's much easier now. It wasn't as tensed up as before. Wasn't as still as before. Lot of parts have been included into my breathing which were earlier not at all used I felt. I really feel that now. So that's nice, very nice.

Me: And if I were to ask you. Comparing last lesson to this lesson, so errr I know you learnt something in the last lesson as well. So which one was clearer for you in your head?

B: The second one most definitely. Because the anatomy of where my diaphragm was and how it stretches to the back, that gave me a mental picture to make sure that, that was also filling with air. That was also moving, that was also important in the breathing process. So the second lesson was definitely...it solidified the first lesson, yeah.

Me: Yeah nice. Thank you.

And let's see what happened with your abide with me.

B: Earlier when I sang, at the beginning of the class, I felt a bit of the higher notes were strained for me. But right now I wasn't even bothered about it. I mean, it was very easy singing.

Me: Yeah the tone has become richer and louder. And there's nice line to it, nice legato. Yeah...wanna sing your O holy night?

How was that?

B: It felt more easy to sing. I wasn't worried about a lot of things that I used to be worried about yeah.

Me: Yeah and how does that feel? To not be worried about anything?

B: **It was very comforting**. Also it was very easy. And one thing, I was able to focus a lot more on the song rather than other things. So maybe I can try out with variations, maybe I can sing and incorporate a different style. So...really nice.

Me: So what were you paying attention to now while singing?

B: So one thing I noticed was my diaphragm, my body was moving automatically. I didn't have to pay attention to that. That was happening automatically. So I noticed that. And also, ummm, just making, what do you say, just paying more attention to the lyrics.

Me: So it was doing its thing right? So when we are singing, we don't want to be paying attention to the mechanics of singing.

So what I would suggest is, between now and next week, when we meet again, try to recall the sensations of how it felt when you were singing this way. If you need help you can quickly do the variations we did and recall and memorise the feeling. And then use that in your practice sessions. Basically remember how the whole thing felt. Rather than turning the whole thing into an exercise. Your body has already learnt it and you probably only need some reminders for a few days.

B: Okay

Me: Any questions you want to clarify before I stop the recording?

B: No

Me: Awesome. So I'll stop the recording now.

Participant 2

Lesson transcript Reshma 1

Me: Hi Reshma!

R: Hello!

Me: Welcome to the lesson.

R: Thank you!

Me: It's nice to have you. To begin with thank you for filling out the questionnaire for me which I had sent out to you. And there were a couple of things I wanted to clarify and I'd like some you know, some more from you.

R: OKAY

Me: So one of the things that you had said that you practiced breathing exercises.

R: Mmm hmmm.

Me: And that you do warm ups and breathing exercises. So just tell me more about how do you practice. In general.

R: How do I practice?

Me: Yeah

R: Starting off with small warm ups, errrr how do you say it, small with the pitch, warm ups and all, lip trills,

Me: Yeah yeah

R: So I start off with all those things and once I get ummm, what do you call it, once I'm okay with it or once I'm done with the warm-ups, then start off.

Me: Nice. So ummm do you generally, how do you know that you have warmed up? Do you sense it? How do you know that you have warmed up?

R: Yeah I feel a little more opened up. The tone...I'll be able to sing a little more opened.

Me: Okay. Yeah.

R: Opened up voice

Me: Yeah yeah.

So when it came to breath management, so you had said that singing long phrases is difficult.

R: Yeah

Me: So can you describe the difficulty that you feel when you sing long phrases?

R: Like while singing a long phrase?

Me: Yeah

R: The phrase will get break or broken between and I won't be able to complete that long phrase. My breath cut down in between so that I cannot complete it.

Me: Yeah yeah so ummmm when that does happen what are the sensations that you associate with that difficulty?

R: Loss of breath?

Me: Where do you..do you feel it in a particular place?

R: Yeah while we lose our breath it is little suffocating and difficult, you know, not able to complete it.

Me: Yeah got it. Thank you.

So for today's lesson we'll have two references okay? First is the first verse of Abide with me. Sing it now and get a sense of how it feels and we'll revisit it at the end of the lesson.

So just keep that in mind, how that felt to sing it and that's your reference okay?

Next I'll give you a pitch, on a steady rhythm count till you reach the end of your breath.

R: counts to 17

Me: Great, so we will do some more work on this second task. Could you do that again?

R: counts to 16

Me: Yeah. So now begin to pay attention to what is happening. Yeah do it again.

R: counts to 17

Me; one more time

R: counts to 18

Me: (plays the pitch) yes on pitch! So what were you paying attention to?

R; So I was paying more attention to the exhaling part, how I breathe out while I'm singing. Little more controlled.

Me: So let's try something. Sit in such a way that you are not leaning or hunching forward, so you're sitting without support. Imagine your torso is like a 6 sided box. If you want you can close your eyes and get a sense of which of these 6 sides are moving when you breathe.

R: Sorry, what should I do?

Me: Get a sense of which of those 6 sides are moving when you breathe.

Were you able to?

R: Yes

Me: So let's try counting again.

R: counts to 16

Me: one more time

R: counts to 17

Me; try again

R: counts to 17

Me: so what were you paying attention to then?

R; I paid attention to my stomach while breathing

Me: so in these 6 sides, which did you notice moved a lot when you breathed?

R: My shoulders moved, my stomach moved, Yeah that's it I think.

Me: Which of those sides were not moving at all?

R: The sides didn't move much and the back also I didn't feel anything.

Me: So the front was it just the bottom half that was moving?

R: Yeah

Me: Okay in the next few breathing cycles, exaggerate the sides which are already moving. Rest of the sides, keep them still.

R: Okay

Me; Let it go and breathe normally. Now all the sides which were not working, use only those sides to breathe.

R: I'll try. Can you breathe without your stomach?

Me: So if don't move your stomach what happens?

R; One way or the other the stomach moves while breathing.

Me: So you can keep one hand on your shoulder and one on your stomach to remind yourself not to move that. Breathe normally and notice what has changed in the 6 sided box.

R: Yeah I feel like I'm using my back also

Me: Okay...more of the other parts?

R: Yeah

Me: Okay count again

R: counts to 18

Me: one more time

R: counts to 18

Me; one more time

R: counts to 20

Me: Okay so what did you notice the last three times that you counted?

R; little more expanded

Me: you felt a sense of expansion? Ok cool. So lets try something. Close your eyes and notice which sides are moving and which are not moving, cause that could've changed.

R: Now I get a sense that I'm using most of the parts

Me: Now overall, which are the parts moving more than the others. Which are those parts?

R: Stomach, chest, back,

Me: shoulders?

R: shoulders did but not as much as these

Me: okay on the first inhale exaggerate the parts you felt were moving and the next inhale exaggerate the parts which were not moving quite so much.

R: Haha...that's quite fun.

Me; Now breathe normally. Now whats happening with the 6 sided box?

R: More of a free feeling...like a floaty floaty feeling.

Me: Nice, Now count again.

R; counts to 21

Me: try again

R: counts to 19

Me: one more time

R: counts to 20

Me: so shall we set a target? Now we are bordering on 20, 21...so shall we set a target of 25?

R: I'll try

Me: Ok count again

R: counts to 22

Me; one more time?

R: counts to 23

Me: one more time

R; counts to 24

Me: still on pitch. Nice so let's imagine your torso is a big beach ball. As you start singing, it deflates evenly. And when you breathe in it comes back to its original position.

R: counts to 22

Me: one more time

R: counts to 23

Me: one more time

R: counts to 25

Me: so what are you noticing now? When you started imagining the beach, how did that help or not help?

R: I think it helped a little bit.the imagination helped to exhale evenly...

Me: yeah your voice has also become even....nice and smooth now. This time do it three times consecutively, you know you're doing a top up breath?

R: I exhale and how?

Me: So you finish and then start again immediately. You beach ball goes goes....then back and goes goes...

R: counts to 21, 22 and 22 respectively.

Me; so how was that?

R: it was okay. The inhaling process was quick.

Me: so do it one more time and pay attention.

R; counts to 21, 21 and 22....

Yes first time in the beginning I think I exhaled too much in the 2nd count itself and then third time I controlled little bit more...

Me: can you explain that?

R: first time I counted and stopped at 21, then next time I counted 1, 2 and exhaled more so I wasn't able to reach the target. Third time I controlled more...

Me: and what did you notice about your inhalation?

R: I inhaled more I felt. Compared to when I stopped and inhaled.

Me: did the inhalation take more time or less time compared to the beginning?

R: less time

Me: so now when you are beginning itself do that kind of inhalation rather than the old way of inhalation

R: inhale quickly you mean?

Me; so think of the sensation that you feel when you breathe the new way. So you can do that now actually. Inhale twice, once the old way and once the new way and notice what is different. Think of the 6 sides and how those sides are moving in the old way and the new way.

R: counts to 20 and 21

The new way I think I used more of the 6 sides than the old way. The new way is helpful for breathing.

Me: okay where do you sense the difference or the ease?

R; once more please?

Me: when you said it was helpful, where did you sense the ease?

R: the inhalation was easier

Me: what I noticed was when you inhaled the old way your voice started crackling by 14 or 15, but with the new way your voice remained steady till the end. Were you able to notice that?

R: yes yes. There was little more control in the new way than the old way.

Me: so what happens with breathing is, when we take in a lot of air and top up, then our body, if we think of body equation, the pressure is trying to equalize. So what happens, when we take in more air, then theres more pressure and it is trying to equate. And the air comes out through the vocal mechanism. So inhale the old way and count and see what happens.

R: counts to 20

Me: yeah. Now try to count without topping up. Just count keeping your goal of 25 in mind.

R: counts to 15

Me; so do that a few times you are not topping up...stop when you've had enough

R: counts to 17, 17, 19

Me: what are you sensing now?

R; in the singing or the inhalation?

Me: generally

R: I didn't feel so much of pressure. Unintentionally I inhaled a bit but it was easier than inhaling the old way.

Me: now let's see what has happened with your abide with me..

R: that was quite...very easier!

Me: yeah whole lines in one breath...and your tone had changed...

R: yeah I felt the tone difference so much

Me: your sound became bigger so it wasn't a loud voice...but it became a nice big round sound...I could hear the difference. It was bright and nice.

R: thank you!

Me; so what did you learn today, what you did not notice before?

R: so basically managing and manipulating my breath and to stick to the target, I was able to learn much about it and the differences of singing abide with me before and after. It was eye opening. The tone improved, breath management improved with the counting exercises and using my body to sing...using all my sides...this time I felt I was using my body to sing.

Me: like everything was participating?

R; yeah, first time I didn't feel it that much but now I felt the difference.

Me: great! So that's the end of our lesson...

Lesson 2

Lesson 2 transcript – Reshma

Me: So tell me, since our lesson last week, what have you been thinking about? Is there anything that stuck with you from last lesson?

R: There is nothing like I'm stuck...I thought over this whole breathing processes, those which you mentioned, the counting thing, the example which you mentioned, the beach ball, it was good.

Me: did you practice last week?

R: yes it worked actually

Me: good. So have you noticed anything in your singing itself that you would like to talk about?

R: in my singing, I think the way of casual singing changed a bit. I became a bit more aware of how im singing, how I exhale how I inhale..., how I use my body while singing. Casual singing changed to a more aware way of singing.

Me: anything you noticed in your voice production as such, with regard to the ease of singing?

R: yeah there is some ease of singing. The issue I told you was the breathing trouble, singing long phrases. That became a little more easier now. It worked. One trouble I face is voice production, volume. I feel I have low volume. That's one issue I felt.

Me: okay. So just like last week, we will start with the reference.

R: counts to 21

Me: yeah so 21. Lets see what that number was last lesson. So your last lesson is 22. So you have maintained that. The first time you had counted to 17. So lets see what has happened with abide with me...

R: I broke the lines in between

Me: that's okay. The way the system learns is that processing happens. I'm using the reference of the first time you sang.

R: ah yes.

Me: so lets go into todays lesson. Ready? So you're sitting in a nice, comfortable way, right? Quite symmetrical in your sitting and your feet are on the ground. Are your headphones pulling you forward? If its bothering you can take it off if you wish.

Just breathe normally and get a sense of where your diaphragm is. Where do you think your diaphragm is, how big it is? You may close your eyes if it helps you to pay attention to what is happening. And once you get a sense of where you think your diaphragm is, also sense your ribs and your sternum moving as you breathe. Once you have a sense of that, count now..

R: counts to 16

Me: count again

R: you wanted me to inhale and count or normally count?

Me: normally count. Try again.

R: counts to 21

Me: now using your fingers, find the lower outline of your ribs and then trace the outline all the way in front and all the way at the back. You should be able to feel it, go very slowly. You can dig your hands in and feel the ribs...

R: yeah

Me: so the diaphragm, that's essentially where the edges of the diaphragm is attached.

R: okay

Me: the shape of the diaphragm is such that it goes up like a dome. Ill send you a picture which shows how the diaphragm is attached to the ribs. Have a look at that. So if you see the ribs, its like a dome. The edges are attached and in the middle it sorts of lifts up. So the actual level of the diaphragm is ...?

R: maybe this part..

Me: yeah yeah. If you keep your hand there...

R: is that why we use this part when we breathe?

Me: yes also our lungs are there. So when you breathe in diaphragm goes down and when you breathe out diaphragm goes up. Now take off your hands, close your eyes and sense your diaphragm moving inside.

R: okay

Me: so notice your breathing compared to how you were breathing before? Now count..

R: counts to 21

Me: do it one more time. Get a sense of what your diaphragm is doing.

R: counts to 22

Me: what are you noticing now?

R: I felt like its contracting while exhaling. Contraction and expansion.

Me: you could feel it? And was your diaphragm where you imagined it to be.

R: no I thought it was lower here.

Me: okay! Now your lungs are here above the diaphragm. Now imagine that they are like balloons. Now imagine for a few breathing cycles, fill only the right balloon with air.

R: inhale and exhale right?

Me: yes when you are inhaling, fill the right balloon with air.

R: okay

Me: now imagine filling the left balloon with air when inhaling. Now imagine filling both the balloons with air. Now paying attention to whats happening, count again.

R: counts to 21

Me: one more time

R: counts to 20

Me: what are you noticing now when you are singing?

R: I felt or noticed that when you mentioned that when you inhale expand the lungs. While counting I felt my lungs and diaphragm contracting and when inhaling I felt everything expanding.

Me: okay. So you felt everything working together..

R: yes.

Me: so keep those two balloons in mind and breathe with your arms crossed in front. Notice how you are breathing. Yeah what did you notice?

R: it felt like something weighing down.

Me: yeah hold it up a little bit so it's not pulling down. Notice what is moving as you are breathing now.

R: the front, the diaphragm and the abdomen.

Me: now lift your right arm and breathe. Concentrate on filling the two balloons.

R: now I felt my stomach only

Me: expanding? Okay. Now lift the left arm and do the same.

R: the sides and the stomach

Me: now lift both arms and shift your weight from one side to another as you are breathing. Are you able to feel your sitz bones? You can move side to side on those bones...

R: so while I exhale I have to shift sides right?

Me: doesn't matter. Ok put your hands down and notice your breathing

R: I can feel my back also

Me: now lift both your hands up, look up and breathe. Put your hands down, notice how you are breathing and count

R: counts to 19

Me: one more time

R: counts to 21

Me: and what are you feeling now as you are singing?

R: I feel more relaxed...relaxed muscles...

Me: what about your sound? I think it became more louder?

R: yes yes

Me: and how are you sensing the ease of singing?

R: more easier...little more relaxed...relaxed muscles kind of feeling.

Me: ok breathe now and pay attention to what is going on. Now on an exhale, make the sound ssss. Pay attention to what is happening. Now add a zzzzz to the sssss. Notice whats going on. Now count.

R: counts to 23

Me: one more time

R: counts to 23

Me: and how does it feel now?

R: mmmmm ease of breath...little more easier...feeling more of my body parts, front and back. Tone difference also. Little more bolder, rounded voice.

Me: yes. This week, when you sing again, would you know this feeling of singing?

R: yes yes

Me: so let's sing abide with me now. And how is this compared to when we started the lesson?

R: the difference?

Me: yes what are you sensing?

R: I felt that my voice became little more louder..opened up. I got an awareness of how im using my body parts...how I exhale and deflate.

Me: this week you could play with this idea in your practice. The feeling that you got in the lesson, memorise and recall that sensation while singing. Rather than making it like an exercise. You could remind yourself quickly if you need and then start singing. Yeah? So any questions before we finish the lesson?

R: Yes I'd like to know, how is it...is it my mind? Or how I got this feeling that my lungs expanded? Is it cos of the exercises we did?

Me: yes

R: is it mind and body singing or using our body?

Me: so you cant separate the mind and body...its an embodied mind...so what the mind thinks, the body does. We have a self image and we move according to that. If you feel your lungs are here you will breathe like that. Now that you have an awareness that its here, your brain is putting things together and you move accordingly. It's a change happening here which will show up in your body. Anything else that came up?

R: no nothing else.

Me: great see you next week for the retention test.

Participant 3

Lesson transcript – Sajeev 1

Me: So hey!

S: Hey hello!

Me: And thank you so much for doing this lesson.

S: My pleasure!

Me: It's really nice to have a lesson. I've never taught you one on one. Just seen you in the choir context. So yeah, first time! So it'll be nice.

Ummm, so I was just going through errr your, the questions which you'd answered for me.

S: Mmmm hmmm, okay.

Me: Errr so I saw that you had written that you, that the way that you learn errr your skill, a new skill is by practicing it on a daily basis. So what does your errr practice session look like? What do you do when you are practicing or learning a new skill? What do you do?

S: Erm I usually go through a Youtube video

Me: Okay

S: Which has a set of errr you know, vocal training exercises.

Me: Okay okay.

S: So with that I have 8 minutes to 10 minutes videos. So with that if there is a program or song coming up I usually go through it and then I keep practicing it.

Me: Okay okay. And errr are there specific skills that you work on? Or it's like a errr...

S: No it is something of a comprehensive sort which covers almost everything. Yeah.

Me: Yeah cool! So when you said that you have like breathing exercises which you usually do, so you mean these videos? That you follow?

S: Yes yes.

Me: Okay so what are these exercises? If you don't mind me asking.

S: So all those articulation sounds like ah ah ah's ee ee ee's, then those bumblebee sounds for breathing..

Me: Mmmm hmmm..

S: All that we do, yes.

Me: Okay okay. And you do this on a daily basis?

S: Not on a daily basis. Errr if at all a choir program is coming up then two three weeks before that....

Me: Yeah yeah yeah. Awesome. So I liked what you had written about vocal technique. You said it's a method used to deliver music notes with ease and precision. So technique, in your words erm technique means that you are able to sing with ease and precision. Am I right?

S: Yes that is what I felt.

Me: So when it comes to breathing then, so what is it that you feel, when it comes to singing and breathing?

S: So as I had written I tend to lose breath, when there is a long stretch, you lose breath and then you have to pause and then you have to take a breath. And I usually strain while singing, I kinda strain also. Just to hold breath you have to like, exert yourself. I felt that.

Me: Yeah and do you know where you feel this strain?

S: Towards the end of a long phrase.

Me: Okay and what are the sensations that you associate with that strained feeling?

S: Going out of breath, you feel that errr, some sort of a tightness. And then, you know, you are uneasy. That is the main you know, you can't be at ease and then be singing coolly. You feel conscious and then, that sort of a thing there.

Me: Yeah yeah. Great, so in today's errr lesson, we will have a couple of references that we will do first. Everything that you do today really requires you to be attentive, to be aware of what's happening. Basically you need to be switched on the whole time okay?

S: Sure sure

Me: Yeah so one of the reference we'll sing is the first verse of Abide with me, the hymn. So I'll give you the key..

Cool. Just keep that in the back of your mind, how it felt to sing it, how easy it felt, how comfortable and we'll come back to it.

Next, I'll give you a tone. In the tempo of a ticking clock, on a single exhale, count and see which number you can reach.

S: counts to 16

Me: Awesome. We will keep these as your initial references and we'll work on this task that you did just now.

So sit in a nice comfortable way, ummm, if possible you can move back a little bit. Sit on the edge of your chair so you are not leaning forward or hunching. Try It again.

S: counts to 23

Me: Yeah. Try it one more time.

S: counts to 24

Me: try it again

S: counts to 25

Me: So shall we set a target of 30 to begin with? Okay!

S: counts to 28

Me: try again

S: counts to 31

Me: try one more time

S: counts to 39

Me: so what are you noticing so far when you are doing this?

S: if my volume is high, then I can't sing for too long. If I bring the volume down, then I can sing for longer. And on the process, I don't think I maintained the tempo as well. Sometimes I was fast and I was able to count more. That was also there.

Me: Okay yeah yeah. So again, notice how you are sitting. Next time you are counting, notice what it is that is happening in you when you are doing this okay? So switch your attention on and notice what's happening okay?

S: counts to 30

Me: try again

S: counts to 37

I think I went off note right?

Me: try again

S: counts to 29

Me: So when you were paying attention now, is there anything that you noticed?

S: I noticed my abdomen becoming tense at the end when I was trying to hold my breath.

Me: Okay. Let's try something

Sit in a comfortable way and imagine your torso as a 6 sided box. Just close your eyes and notice when you are breathing, which of these sides are moving and which of these 6 sides are not really participating when you breathing?

So where do you notice is moving a lot when you are breathing?

S: The front side

Me: The entire front side? Top and bottom?

S: Yes. Top and bottom. And some sort of movement towards the sides.

Me: Okay. Top side?

S: Yeah top sides.

Me: Where do you think there is no movement at all in those 6 sides?

S: The top.

Me: The top. Shoulders? Okay where else? Back? What's happening with the back?

S: Back? Yeah nothing. I can't feel anything.

Me: Sides?

S: I can feel in the upper portion, not so much in the lower portion.

Me: okay. So the next few times that you are breathing, the sides which are moving already, exaggerate that for about 3 to 4 cycles.

Now just breathe normally. Now notice if anything has shifted in those 6 sides.

S: The top portion is more involved when I breathe more actively.

Me: Now when you are breathing normally and not exaggerated, what do you notice now?

S: Yeah I feel more at ease. When I exaggerate I have to exert more. When I sing normally, only the front portion is moving. I feel more at ease the second time I'm singing.

Me: Yeah yeah. So now the parts which were not moving at all, your back and your sides? Use only those sides to breathe now. Let the other sides go to sleep

S: Haha I can't do that.

Me: Try, even if it's a little bit.

Let it go and breathe normally. Once again check those 6 sides now. Has anything shifted from the first time you noticed? Has anything changed? Just observe.

S: Once I exaggerated and used the sides which I had not used before, now when I breathe normally I feel none of the parts are moving. I feel the normal breathing is much more easier!

Me: Let's try the exercise again. Keep the 6 sided box in your awareness.

S: counts to 40

Me: try again

S: counts to 44

Me: try again

S: counts to 46

Me: That was your note. You were more or less on pitch. What do notice now?

S: I feel my control is much better now compared to when I started. This is better.

Me: And how does it feel?

S: I felt none of the parts were moving. Like the box was static.

Me: Did you feel that it was static?

S:Yes

Me: Close your eyes again and notice the 6 sided box and what's happening. So Is it static?

S: Not now

Me: So what are the sides moving now?

S: Now I feel parts of all the sides are moving now.

Me: Yeah. And it's not like just a few sides are overworking. So what you feel as a static is that everything is now involved. And Your sensing a your effort level...

S: has come down!

Me: Yeah that's what you feel that nothing is moving. So is that making sense what has happened with the 6 sided box?

S: Yes yes making sense.

Me: Now that things have shifted, are there any parts which are not moving anymore?

S: All the 6 sides are moving but to a varying degree. Or should it be equal?

Me: No. Which parts are moving the most and which parts are moving the least.

S: I feel the lower portion of my back is moving the most and front is moving the least. Not much of a difference but I can feel...

Me: Yeah. So lets try something different now. So alternating on one inhale, the parts which are moving the most exaggerate that and next inhale, the parts which are moving the least, exaggerate that.

Now just breathe normally and sense what is happening with your 6 sided box now.

Ok now I'm gonna change the pitch. Try counting on that.

S: counts to 29

Me: try again

S: counts to 46

Me: try one more time

S: counts to 58

Me: how was that? How did that feel?

S: I didn't feel any strain. It went smoothly.

Me: Yeah. For a minute I thought, is that the same exhale?

S: Hahaha

Me: So let's try one more thing.

Imagine a big beach ball, as you are singing imagine that the beach ball is steadily and evenly deflating as you sing, till you come to the end of your phrase and sing.

S: counts to

Me: try again

S: counts to 25

Can I ask you a doubt? I'm actually holding my breath. I feel I'm not exhaling. Just like deflating a ball, I don't feel I'm letting out the air. I feel I'm holding my breath and letting it all out at the end.

Me: Okay! So let's try it like this. On a 'ssss' deflate the ball. Try that. Yeah, do that one more time and pay attention to what's happening. Now make the ssss into an zzzz. Start with an ssss and then add the zzzz.

Try one more time. Now count and do it

S: counts to 24

Me: try one more time

S: counts to 50.

Can I say a difference now? Before when I counted to 25 and now when I counted to 50, I was hunching forward when I reached 25 and when I straightened myself I was able to reach 50.

Me: Yeah. Very good. So you're noticing that and becoming aware. Have you been aware of this before?

S: Not much. No.

Me: This time when you were counting after the zzzzz exercise, did you notice anything?

S: No

Me: The breath holding that you said earlier.

S: Ah yes. When I start counting I go back to my old way.

Me: When you are holding your breath, what does that feel like?

S: I feel that sort of a catch in my lower abdomen. So you are not breathing like a deflating ball, you're just holding it all in.

Me: So when you did the zzzzz, what were the sensations that you felt? Your air was definitely going out. Were you paying attention to what was happening when you were not holding your breath? Do that again and notice.

Yeah and now count.

S: counts to 22

Me: So that's when you were not holding your breath.

S: No I was not.

Me: were you able to sense that?

S: I was

Me: what is different about this sensation compared to when you are holding your breath?

S: Maybe out of practice, I feel more comfortable when I'm holding my breath.

Me: Does that feel very familiar? Something that you are used to doing?

S: yes

Me: Do it one more time and pay attention to the quality of your sound when you are not holding your breath.

S: counts to 15

Me: And now try your earlier pattern

S: counts to 20.

I think I went back to the new pattern .

Me: haha. Try one more time.

S: counts to 24

Me: What are you noticing now?

S: I feel... what should I say... when I was counting 30s, 40s, 50s, earlier, when I look back, was I taking short breaths in between? I don't know....Did you notice something of that sort?

Me: I noticed that one part your voice thinned out when you were trying to hold your breath in I think. And it's absolutely brilliant that you noticed it yourself. That means your attention was switched on. And have you never noticed that before?

S: Not to this extent

Me: Usually when you are learning a new skill, especially singers, what you need to understand is, that no one learns singing from scratch. We have already been singing and when we are learning something, it is usually unlearning and relearning. When we identify patterns which are sub-optimal, that's the word I would use, and we are making me better. During that time it feels a bit woooo, a bit different. How does it feel to sing now?

S: I feel I'm aware of what is coming out of my mouth. Each note has its own weight now.

Me: Let's try one more time and see what has happened.

S: counts to 22

Me: This time, erm, instead of taking a big inhale, have you seen this before? Imagine this is you, when you are singing you are deflating, then come back to normal rather than trying to push your limits by taking in more air. Just start from where you are.

S: hahaha I just took a big breath...

Counts to 16

Me: try again

S: counts to 19

Me: how is that?

S: Yeah. After the long run, I take a deep long breath.

Me: So this time what did you notice?

S: I need not take extra effort. Whatever is there, let it be and I can build on it.

Me: so let's try again.

S: counts to 17

Me: try again

S: it's very difficult unlearning the learnt no?

Me: It comes by repetition, that's it.

S: counts to 30

Me: try one last time

S: counts to 31

Me: Yeah and at that time, the last couple of times, you were definitely not holding your breath right?

S: I think I did the last time.

Me: It's neither the new or the old thing now

S: yeah

Me: When learning a new skill, this confusion is a good sign. It means that something is dislodged trying to figure out...Can't go back to old thing and not yet at the new thing. It's a sign of learning happening. How do you feel now?

S: It's confusing now, but hopefully it will become clearer.

Me: Yes that's why we are having another lesson next week, to see how things are progressing.

S: Sure

Me: Now that you are a little bit dislodged, how does it make you feel?

S: Learning a new skill takes its time. What do you want me to tell you about the experience? I didn't understand...

Me: How you feel as the learner....to know that you are in the learning process which is messy...especially a motor skill. When you are bang in the middle of the mess, how does that feel?

S: That whatever I've done so far has to change and things will get better?

Me: Things usually get worse before they get better. So let's try your abide with me and lets see what happened to it.

How does that feel compared to the last time?

S: More controlled I feel. I didn't have to gulp air at the end.

Me: Yeah. What I would say, stick with the process. The main thing would be to remember what you learnt in this lesson. What did you learn today that you did not know before?

S: I remember when you came for choir training, you had mentioned the 6 sided box and how everything works together, but now I'm more aware of how all 6 sides of the box work together. And when you finish your breath you need not gulp a breath, it automatically recoils back. It was more of effortless singing towards the end. Comparatively.

Me: What did you notice, like, any patterns in your singing which you hadn't noticed before. Because your attention is on

S: When I close my eyes and notice, rather than concentrating on the video I can notice a difference. Also when my posture is straight and my hands are off the table, I can notice the difference.

Me: Yeah and all this I never told you. Because your attention was on, you noticed it yourself. Lots of learning today in one hour. Great. So I will stop the recording now.

Lesson 2

Lesson 2 transcript – Sajeev

Me; So tell me, what's been happening since last weeks lesson? Is there anything you noticed during the course of your singing, anything that you want to tell?

S: I feel I've been more conscious about what is coming out of my mouth. I mean, I'm more aware of what is coming out and I feel I have more control than before.

Me: So have you been practicing?

S: To be honest, not everyday, but when I got some time I went through it yeah.

Me: So, umm, you're saying that you're more aware. So what is it that you are more aware of?

S: The pauses after the long notes. I'm aware of how I should be taking breath. I should not be gulping. As was discussed last time...Earlier I used to be casual about singing, now I feel I'm more serious about it.

Me: Let's go back to last week's task as a reference.

S: Counts to 14

Me: And can you sing the first verse of abide with me?

Now sit in a nice symmetrical way. Not leaning on the table or hunching and using your skeleton. If it helps you to pay attention, close your eyes and notice your breathing. Sense where your diaphragm is, how big is it, what is its size and where is it located in the torso> And sense your ribs and sternum as well and what they're doing as you breathe. Once you have a sense of that, open your eyes. Can you sense it, all the movements?

S: Yes my ribs are moving forward and backwards and my diaphragm moving up and down. More or less. Not with so much clarity, but I can feel something.

Me: Keeping this awareness, count again.

S: counts to 13

Me: one more time

S: counts to 14

Me: Now using your fingers just trace the lower edge of your ribs, all the way and the back, where it attaches to the spine at the back. Go a little more slowly. Yeah and now sense the movement in that area which you felt just now. As you are breathing what can you sense?

S: Outward and inward movement.

Me: All round. So I realize I'm speaking to a doctor, so you know the outer edge of the diaphragm is attached to where you touched. So show me where the bulk of the diaphragm is attached.

Yes that's where it is attached, and it comes up like a dome or a plateau over here. Yes you can mimic with your hands what happens to the diaphragm as you breathe in and out.

Now put your hands down and get a sense of the movement of your diaphragm inside. What are you noticing about your breathing?

So keep this in your awareness and count.

S: counts to 15

Me: one more time

S: counts to 14

Me: So what were you sensing then? What was your attention drawn to?

S: Not holding my breath. I'm still confused whether to hold it in or let it go.

Me: Do you still have the tendency to hold your breath?

S: Yes a bit.

Me: But better than before?

S: Yes it's better than before

Me: So what are the movements that you are sensing now?

S: Somewhere I can feel the slow gradation in my movement.

Me: So where are you sensing the movements now?

S: I couldn't feel it in the back, more towards the front and the back.

Me: Imagine that your lungs are like lung shaped balloons. Next few inhales imagine that all the air is going straight into the right balloon. Now breathe normally and notice the difference between your right and left side. Now breathe and fill only the left balloon with air. Now notice your breathing and imagine you are filling both the right and left balloons with air at the same time. Now breathe normally and notice your breathing. Now paying attention to what's happening, count again.

S: counts to 19

Me: once more

S: counts to 23

Me: what are you sensing now?

S: I'm becoming more and more aware of my breathing.

Me: Can you sense what's shifting everywhere?

S: Mostly because I know the mechanics, I can feel the doming of the diaphragm.

Me: Let's try one more thing. Imagine your two balloons filling, your ribs, your diaphragm. Now cross your arms and breathe. And notice what's happening. Now lift your right arm and breathe and notice what's happening. Now do that with the left arm. If you are feeling tired then you can put it down and try again. Now lift both your hands up and shift to one of your sitz bones and breathe. Shift to the other sitz bone and breathe a few times. Put your hands down for a second and repeat it one more time. Don't fall off your chair! Put your hands down and notice your breathing. Now put both your hands up, look at the ceiling and breathe. Now notice your breathing. Keeping this in your awareness, count again.

S: counts to 15

Me: one more time

S: counts to 22

Me: how was that? What are you sensing now?

S: I'm much more at ease when my posture is straight. All those movements restricted my breathing, I'm much more comfortable now.

Me: Yeah and how has your breathing shifted from the beginning of the lesson? Are you able to sense it in your awareness?

S: I don't know how to put it into words but I can feel the movement of the whole unit. From what I could feel, In the beginning I thought everything was restricted. Now I can feel everything is free.

Me: Yeah now paying attention to what's happening, exhale on an ssss till the end of your breath. Now on top of the ssss add a zzzz. Now the same thing, do it three times continuously. Yeah, now count

S: counts to 23

Me: one more time

S: counts to 24

Me: And how is that feeling?

S: All of that what you said, keep that in consideration. I don't know how to put it into words honestly. It feels like one unit.

Me: Does it feel easier or difficult?

S: Definitely easier.

Me: Does your voice feel more brighter or darker?

S: Voice I don't know, but it has become more easier. I don't feel it to be harder.

Me: And if I asked you, what is it that you have learnt in this lesson, what would it be?

S: How to be more aware of your breathing movements while singing and how, the more you are aware of it the more controlled and effortless it can be. It's all here...

Me: Paying more attention yes...has your idea of breathing changed since the last week? Any revelations?

S: As someone who exerts myself while singing, I feel that can be brought down very much if I follow your technique. I exert myself too much while singing...

Me: What you sang now, does it feel more effortful or less effortful?

S: Less effortful

Me: So let's see what has happened with your abide with me. Yeah and how did that feel compared to the first time?

S: Compared to last week, I feel more at ease now. That gulping of air is not there.

Me: Does it feel automatic or something you are trying to do?

S: Honestly it feels like something I'm trying to do right now.

Me: So when you practice this week, you can recall the sensations and remind yourself of the exercises we did and then your body will quickly recall the sensations. You don't need to repeat the whole lesson again because your body has already learnt it and it's in your system now, maybe take ten minutes to recall the sensation of the whole unit working. Eventually it will take less and less time for you to recall. It will come to that point. So just close your eyes and imagine that you are doing it and then practice.

S: So anything that you sing, you mean to say I have to bring that unit to mind?

Me: Yes try it and see. Yes your instrument has learnt a new thing now. Anything else?

S: How long should you practice everyday or does that differ from person to person?

Me: I think it differs because eventually we want everything to be automatic and unconscious. Now you are aware of it and conscious. Everything cannot be kept in your head at the same time while singing. Consciously you can only keep 7 things in your mind while singing. It has to come to that state where it is unconscious and automatic. So when we practice, we are solidifying what we have learnt. By recalling the sensations, you are firing the neural pathway again and again till it becomes automatic. That's why we practice. Whatever fires together wires together. So it's not about a certain amount of time. Play with this idea this week.

S: I've actually been doing it this week. I could feel the difference actually

Me: What you experienced today is the sensation of it. When you said you felt the doming of the diaphragm, how much ever I explain to you, You're not going to understand unless you experience it. Your body knows what I'm talking about. That's what you are recalling when you practice. That's eventually what happens in performance, we are not thinking about mechanics. So you are more free to perform, cause you know your body is going to do it anyway.

S: That builds your confidence too.

Me: what are you thinking now?

S: That you need to constantly reminding yourself and at one point it will happen automatically.

Me: automatic and unconsciously. You won't even realize it.

S: Yeah I need to work on it

Me: Just play with this idea this week and see.

S: Sure

Participant 4

Lesson 1 transcript – Olive

Me: Hi, Olive, thank you for being a part of my study. So, and thank you for thank you for filling out the questionnaire which I had sent you. So, there were a couple of very interesting things that you had said in your in your answers. So can I ask you a few things from that? Go for the lead? Yeah, so one thing that you had mentioned, which is very interesting is that you're about using your vocal tract, a vocal instrument in the right way to be able to sing easily. So this person, regard to vocal technique, so you felt that? Could you elaborate a little bit on that?

O: So I think if you do anything, if you do a sport, if you do an instrument like piano or violin, or if you take any sport as well, each thing, or each sport, or each voice or instrument has its own particular technique to do it the right way. Yeah. So I feel if you do the particular thing in the right way, then that should be more easy. I have throughout the years, I think I have from other people I could have, I could get the feedback about my voice. So through time, I can feel that difference in that the ease and the singing, when I improve my technique. So I think vocal technique wise it eases everything. That's what I feel it should be more. If you sing it the right way. It should feel good. Feel good for our throat. The whole body shouldn't be strained in our that's, that's what I I feel. Yeah.

Me: Yeah. Thank you. That's very good. Um, and so when it came to breath management, you had mentioned that you have you notice that you have difficulty when you go into the higher registers? Yeah. So. So you are sensing that with the in relation to the previous thing that you said, connecting it? So you're saying that if you're able to sing it do it is that means you're doing it? correctly? Because you feel that something is not being used properly there?

O: Yeah. Yeah. I'll explain what my problem is correctly. Yeah. If I sing in my ear, for for the higher register, say, for example, after the G, middle C, just after after the middle C, the D comes now. Yeah, I think that's g three or something. I don't know. before. I think default Yeah. Yes. Yeah. So after the D for anything, normally, I hit it with the false voice word. falsetto.

Me: Okay. Yeah.

O; And when I try to extend my note, I'm finding it very difficult. When I go to when I, after that particular chest voice kind of thing. I can't extend I mean, extend the whole phrase and all it's difficult for me to Ah,

Me: okay, okay. Yeah.

O: Below that G. I think I'm, I'm fine.

Me: Okay. So when you feel that, that that shift in register, then you find that your breath is also the Yeah, not supporting it. Am I right?

O: No, no, yeah, it's not supportive, very less. I don't know how to manage that.

Me: Okay. Okay. And moving on. So in the context of learning. So you had mentioned muscle memory. Yeah. So when it comes to vocal technique, learning vocal technique, how do you develop muscle memory? So personally, I'm asking.

O: So, first, I think I'll try to do some exercises related to that and ask people who are, very good in singing .. are there any exercises and all. So, if I get some exercise, I try to do the do that. And if for example, if there is a high note in a particular song, I take that cipher for two or three lines. And I tried to sing that in the context of that, so that I can get the flow of things. So, I practiced that, that was what I do. Yeah, yeah, back to the same thing in the context of the song. And, and exercise.

Me: Yeah, so you practice everything quite regularly. Yeah? Describe your typical practice, routine,

O: typical practice routine, I think, for the last year, I have attended some classes in Bangalore. So, after that I started singing scales. And before that, I usually just sing the song only. But after that class, I started singing scales to improve my pitching. Then what breath exercises, then I'll go to the song and try to learn it. In practice, I think I'd like to sing songs more than doing scales... that I like to sing. So,

Me: yeah. And do you practice every day?

O: No, no, no.

Me: Okay. Um, so, in your words, as a singer, as a singer, what, what does muscle memory mean?

O: muscle memory. Okay, at some point of time, we get a for example, if you take a high note, if you take a note, like a or something, that kind of a note, which is very high for me. And at some point of time, while I sing I get that note, but at some times, I won't. So that is, I don't have that muscle memory. **So I tried to repeatedly and get that right technique and do that every single time.** In the right way, I think that is, that's what muscle memory. Yeah.

Me: So that your technique **becomes more reliable.**

O: Yeah, exactly. Yeah. **So it's not hit or miss. You know that. It's going to definitely happen.**

Me: Yeah, yeah. Yeah. And so when you're practicing a particular skill, like you're saying that you choose exercises and you practice it. So how do you know that you have learned it?

O; When I can sing that in ease with ease, I can sing then I can understand they have learned that skill. Yeah, that's how I go about it. Yeah, if it's easy for me at first, it was hard then after that, doing it after doing the exercise. **If that is easy for me when I think I have mastered the skill.** Yeah, of course. I try to record myself. Okay by to hear myself what I'm what I'm doing. nice, easy peasy, then I think it's fine.

Me: Yeah, so you so you relate. Good singing with easy singing? Yeah. Okay. Great. So, um, so we go into the lesson sentence today's lesson, we'll have two references. Okay. I know that you have a song that you'd like to work on as well. So we'll sing these two references, then we'll sing your song. Then we'll do the lesson. And then we'll revisit your references and your song.

O; Okay, what is that?

Me; First we'll sing it first you will sing. So your reference will be abide with me. So you're going to sing that first? Then you will leave that aside. You'll just make a note of how it felt. To sing it.

O ; Okay. Okay,

Me: then we'll put it aside. Then we'll do the lesson. The actual main body of Okay, okay. Oh, and then we'll go that song again. Okay, again to see how, how it has changed or not changed what has happened? Yeah. Okay. So can you sing the first verse of abide with It's an E flat. Yeah.

Good. So just make a note of how that is okay, how it felt. Just take a mental picture of that and keep it aside. Next is on middle C on a single exhale. Okay, and keeping a very steady rhythm count numbers to as much as you can, for instance. So C is

like that till you're able to be able to see what the what the maximum number is basically.

O: Okay, okay, okay.

Me: that's middle C. You're singing on middle C, right?

O: Yeah,

Me: that's comfortable for you.

O: Should I lower? No, I think I'm just fine.

Yeah. Do you want to find a note which you're comfortable with?

O: Yeah, I think it. Yeah.

Me: Try it on that.

O: counts.

Okay, so we'll keep these two here. We'll keep both of them as your reference. C and D. Yeah. Okay. So this is what we are going to be working on today. So pick the note that you're most comfortable with that a right and do it again. Oh, Hang on. Hang on. Hang on. Sorry. We forgot to sing your song. So do you want to sing your song now? Once Okay. So now when you're singing it again, make a note of what everything feels like. Where you're where you feel the lack of ease, how comfortable you are. Just make a note.

Lovely. Thank you. So have you made note of what it felt like? What are the areas? What are the areas that were really easy? And then what are the areas which you will like? Which I you would know better what those areas are. So this is for yourself. Okay. Okay, good. Awesome. So now let's go back to your A. Okay, and now count again

O; counts

Me: So now, do it again. This time pay attention to what you're doing what's happening.

O; counts

Me: once more.

O Okay.

COUNTS

Me: So what are you noticing? Is there anything that you noticed now?

O: I think in between and I think too much air of going out. Okay. Yeah, and the abdomen is coming inward.

Me: Yeah, yeah. Good. So now um, so just now that you're sitting in a nice comfortable way. Now just imagine your torso is like a six sided box.

O: Okay, box,

like a box, okay. So this is one side, side, another side, another side, front, back and out. So imagine your torso is like a six sided box. Okay? And now um, if you need if you want you can close your eyes and imagine and just pay attention to your breathing. Okay, okay. Pay attention to how you're normally breathing. And notice which of these six sides are moving when you breathe.

okay, okay. Yeah. And what's happening to the top?

O: I think it's slightly moving

Me: Yeah. Is it? Yeah. Is it moving?

O: No, no, no.

Okay. Um, so let's try this. So, you know, the the parts which are already moving. So let's divide your box into half. Okay. Okay. So upper half, lower half and the lower half which is already moving. The next few times when you breathe, inhale, exhale. exaggerate that. So don't use this bit at all. So keep keep everything here. Still. And only the lower half, exaggerate it and breathe.

Okay, and now just breathe normally. And notice if anything has shifted already, if the six sided box is still

O: open, upper body has stopped moving,

Me: stop moving. Okay? Now, the next time keep all the lower part completely still, you're not allowed to breathe with that. Okay? So, breathe using only your upper half of the box, back, sides, front, shoulders. Keep everything else to.

So exaggerate, exaggerate the top part when you're breathing. And now just breathe normally. And now what are you sensing? So close your eyes and when you're breathing normally? What are you sensing with the six sides now?

O: The front I breathe normally. Slightly more.

Me: Slightly more. Yeah. So what is happening with the other six sides? Has anything changed? Is everything the same?

O: This spot has become a little more it's not moving as before, I think I think.

Me: Yeah. And what's happening with your back.

O: That part is also moving a bit more I think. I think

Me: No, stop. Okay, so now now. Now keeping in your awareness. This six sided box now, count again?

O: counts

Me: what are you noticing now?

O: I think it's more stable note, I think has become a bit more stable.

Yeah. Yeah. And also your count is increased. So you had like 1213 and now it's 16 is your minimum? Yeah. Yeah. So, again, bring into awareness the your six sided box. So this time, one inhale, you're going to exaggerate and you're going to use only the bottom half to inhale. next inhale, only the top of next to hell. bottom half, like so. You're gonna alternate.

O: Oh, okay.It's fun.

Me: Yeah. And just breathe normally now. How's that?

O: Yeah, I'm thinking I was able to do it. Yeah.

Me: And now notice your box. Has anything shifted? Is it the same

O: It is opened a bit more mass volume has increased when I close my eyes. I think the volume here has expanded it.

Me: Okay. Yeah. Okay, now, count again. Let's see what has happened.

O: counts

I think when I think of the count, somewhere else, it's going.

Okay. So I'm in the first part, I think till seven, I think it's stable. And after that, I think that that control is going somewhere in between.

Me: Okay, so where where are you sensing this loss of control? are you able to feel it somewhere?

O: Anyway, I'll think again, okay.

Counts

Me: What are you noticing now?

O: I think something has happened at some point has become stable. I don't know what has happened I don't know what I did when I think now it's it's table thing I'll do it one thing and see what is happening.

Me: Keep an awareness Sorry, sorry. Keep an awareness your 6 sided box. Okay keep that

O: counts

Can I ask you something? Is it like the first part with the abdomen and then the this part becomes more and get Is it like that when we come to the end? Or is it again one thing of what I felt is when I started singing now, say for 12 or 13 From there, the abdomen is engaged. Okay. And then the stomach the abdomen part has went inside after that I can feel this part going in... is it like that? I don't know. That what I felt,

Me: okay. Yeah, yeah. Yeah. Try another thing. So imagine that your torso, okay, your entire torso is like a big beach ball. Okay. Okay. Imagine that. It's like, filled with air a big beach ball. And when you begin to sing, the beach ball deflates evenly as you begin to say, okay, so keep that in your imagination and try...just imagine just imagine your whole your whole from your shoulder whole thing is a big beach ball. Okay, like, you know, like Asterix obelix, like the body is the body is equal. Okay. So imagine that. Yeah. Okay.

O: COUNTS

Me: try again.

O: COUNTS

I don't think they're perfect.

Me: Try try again. Try again.

O: yeah, okay, okay.

counts

Me: What could you feel now? When you imagine the ball?

O: I think it was a bit more unstable than the previous one, was it?

Me: no your voice was stable. How did you feel?

O: I didn't actually think of it...let me do it again...I was only thinking of the beach ball...

Me: do it like this...keep your target in mind...you reach your target and fill the beach ball and start counting immediately...

O: okay okay

Me: 3 times continuously

O: counts

It has come down. I think im not using this part

Me: yeah what are you noticing about your inhalation?

O: inhalation....i think im more tensed now in this part now...

Me: have you noticed that before?

O: I don't think so much...hahaha...I think before it was more easy...I don't know...let me try once more...

Counts

I think im getting a feel for it...

Me: now when you do it again...notice the difference between your first inhale and the inhales that you do in the middle...and keep that 6 sided box in your awareness...

O: counts

Me: what did you notice

O: it feels like filling in between...the ones in between..

Me: the first one your count is 22...when you do the filling of the balloon inhalation then it was 26...28..

O: I think I didn't inhale enough air for the first time

Me: what did you notice about the 6 sided box

O: I feel im able to breathe better when I think of that...rather than the beach ball and I feel this part has expanded...

Me: ok count again

O: counts

Me: could you get a sense of what is happening?

O: yeah this part being engaged is making things more stable. I think before I used to think of the stomach alone when breathing...now I feel like more volume here is more stability...is it like that?

Me: it's more of everything working together...not just top or bottom...the entire 6 sides are contributing to the singing

O: okay

Me: close your eyes and notice your 6 sided box again and how you are breathing

O: yes all 6 sides...

Me: now I can see the whole torso is free and moving...your count has changed from 12 in the beginning to 26/27 now...just for your reference. Lets go back to abide with me and see what has happened there.

O: I can feel like I can sing the whole line

Me: yes especially the third line which you broke in between last time, you went through this time...and your tone is improved too...what are you thinking?

O: I was thinking only of the breathing...I feel this back part is not engaged....i feel I should use it more...

Me: lets go back to your song...just sing and see...

O: I think the major difference is ...I was singing like hunched before...now im sitting like this...I feel better...I think the first part was more stable than before...

Me: there was a nice vibrato at the ends...sounded free

O: usually when I sing...it's a tensed kind of singing

Me: I felt you were much more into your song now...

O: rather than making something happen...there was more area in this part...I think the 6 sided box works for me...

Me: if I asked you one thing you learnt about yourself...what would you say?

O: I think 2 things...first...just after the inhalation...I lose more air after 1,2,3....i think that's where I lose control...

Me: why do you think that is?

O: I don't know

Me: did you feel the same things after the middle inhales?

O: no I didn't notice...maybe that's why I could sing more after that...

Me: yes so equalising of pressure is happening...low pressure and high pressure...too much pressure wants to equalize when we take in a huge breath...putting it simply...try It again and see...sense it for yourself...

O: counts

Me: could you sense it?

O: I think I was able to...yes

Me: it wasn't just the count that was longer...that is just evidence

O: yes yes

Me: and what was the second learning?

O: yeah...the slouch is gone...

Me: yes that happened on its own right?

O: yes the box helped a lot...ive heard of abdomen breathing before...so I never thought of that part...

Me: so whats is there..

O: lungs?

Me: yes...most of your lungs are at the back...so when you breathe it naturally expands...

O: oh okay **that's a new thing**...I think now it will be more easy...

Me: yes that's something new about your instrument....i'll send you a picture...can you see where your diaphragm is?

O: here?

Me: so your lungs are done by then...stomach is here

O: I was thinking the other way around...I always thought not to move this part...

Me: the body will adjust itself...just be aware...

O: yes yes...

Me: you've learnt something new about your instrument...we use our body the way we imagine...

O: so when you inhale the stomach wont go out? Or it will happen naturally?

Me: yes yes

O: oh I was thinking the air goes to the stomach like a balloon and inflates...

Me: yes different people have different ideas of breathing...but if you correct your thinking and use your instrument right...then its better...

O: yeah...I think that's the main problem...I think that was my problem...my voice was not stable...many people said the control and stability happens with the stomach...thinking wise this is more free...I used to think only of the stomach

Me: yes your whole body is supporting your voice...that is a different experience altogether.

O: yeah yeah

Me: any more questions before I stop the recording?

O: no!

Lesson 2

Me: Hi. So welcome back!

O: Hello.

Me: Second Class. So tell me how has your week been since we had the class last week? Have you noticed anything in your voice? Anything that you want to report?

O: Yeah, the breathing the way that we that I've been thinking has changed. So I think now it's more the singing is more stable. I think that control is there. Now when I think when I ...when I think of that box, yeah. analogy. Yeah, I think it helps to thing. Especially the stability is has been improved. That's what I think. Okay. And I think the control wise as well as the various things. I personally can feel that. Okay. Good. I don't know how much is coming out.

Me: And did you spend any time practicing on your own?

O: Yeah, I've been singing last week. So I was applying that. I know thing. I didn't spend time as a singing skills but I've been singing songs in my church. Okay, so while I sing I try to apply what I learned.

Me: Okay. Yeah. Nice. So, we'll go back to your, the, you know, the exercise that we did last week. Yeah. And just see where it is now. Okay. Just as a reference, so I'll give you middle C.

O:Ya. Yeah, I think I sang A last week.

Me: Okay, yeah.

Me: Yeah. Okay, so let's see. Yes.

O: counts to 24

Me: nice. And could you sing the first verse of abide with me? And again, just make a note of how it feels. In the singing all that pay attention. Okay.

Yeah. Cool. So we'll keep that and come back to it at the end of the lesson. Okay. Do you have a song that you want to sing?

O: Yeah, I think the same, same thing.

Me: yeah, and you don't have to sing the whole song if you don't. If you don't want to. You can stop whenever you feel satisfied that you have a reference you can stop.

O: Okay. Okay, and then I'll sing probably the second part. I think Yeah.

Me: Yeah. Good. So keep that in mind. Yeah.

Yes, yes. Yeah. Okay, so last week, I know we finished our class with discussing about the diaphragm and where it is where it is located. So just sitting nice comfortable way with your feet flat on the ground. And and if you want, you can close your eyes if you want to pay attention a little better. If you think that helps you. Close your eyes and get a sense of where your diaphragm is. How big is it? What is it size?

O: So okay, okay.

Me: So how big do you think it is? Where is it in your torso, and how is improving such as get a sense of that. And also sends your ribs moving. And your sternum. So your sternum is if you see your collarbone attached over here, the bone that's under here is the sternum, which is where the ribs come and attach in front. So get a sense of the ribs and the sternum, moving as you breathe along with your diaphragm, so everything, get a sense of that.

O: I think that ribs expand when we inhale, right? Yes. Okay, yeah. And the diaphragm will go down.

Me: Yes. When you inhale.

O: Yes. So just, I don't know how to think about the sternum.

Me: So this, and this the middle, middle part.

Yes. So that's where the bones come. The ribs come and attach in front.

O: This one in the front? Yes. Okay. Okay. Okay. Okay. Okay.

Me: So you can you get a sense of how it's moving when you inhale? Good. Yes. Yeah. So when your ribs expands that also moves

O: Okay. Okay.

Me: Yeah. So get a sense of that. And keeping your awareness there. Okay. So keeping awareness to how everything is moving. So count again. Do that. Exercise?

O: No, let me think again.

Me: Yeah.

O: counts to 17

Me: Yeah. Okay, so you can open your eyes. How is that how what are you sensing then?

O: I don't know. I can feel the ribs moving. I think the duration has come down. I don't know why. Maybe I've stopped thinking about the books.

Me: that's okay as in Yeah, it will shift. But yeah, that's okay. Um, and what about your ribs? Yeah. Were you able to sense things moving?

O: Yeah, I can feel the ribs moving. Definitely. I can feel this part also coming up.

Me: Yeah. So now, using your fingers, okay. Find the lower edge of your ribs. So it starts Yeah, yeah. So it starts and it goes. So trace the lower edge of your ribs. So you can actually dig in a little bit, nothing will happen. So dig in and feel your ribs and all the way to the back the back of your ribs as well. And find the back edge, lower edge of the ribs. Where attaches to your spine, your back. Trace. Go slowly. trace it very. Yeah, fine.

O: It goes up. At the backside. Does it go up? Ah, no, no, should it or the?

Me: there are a couple of floating ribs at the back. But you should be able to feel.

O: Oh, yes, yes. Yes. Yes.

Me: Yes. So find that lower edge where it is. Yeah. And then yeah, yeah. From the back, come again to the front. Now, you can actually put your hands down on your lap in front of you. And now get a sense of that lower part of your ribs, what you touch now get a sense of what it's doing.

Now, that lower edge when touched, is actually where the outer edge of the diaphragm is attached.

It comes down. Yes. So the attached where you touched inside, then in the middle, it goes up like a dome.

O: Okay, okay,

Me: that's outer edge like a 360 is attached to where you touched. So that's the lower lower attachment of the diaphragm. So I'll send you a picture now.

O: Okay,

Me: on your phone, so you can see. So you can see your ribs and then how the diaphragm is attached.

O: Okay,

Me: so what you touch is where the outer edge is attached, and then it rises up like that. And then it comes up to here. So if you keep your hand if you keep your hand like like this, oh, keep it like this and keep it here.

And then when you inhale goes down. It comes back. Inhale. So we are imitating the action of the diaphragm kind of inhale, reps go out Excel. It's coming in here. Exit. It comes up again. So

Me: it's here, right? Yes, yes.

Me: Yes. So from here, it attaches and if you see the picture, it rises up in the middle and comes here. So now you could put your hand out, like put it in front, on your lap, on your leg on your side. And now get sense of imagine the diaphragm moving in and out, up and down as you as you breathe.

Me: So where do you send the diaphragm now? And notice your breathing Yeah, are you able to sense it moving.

O: Yeah. Yeah.

Me: And all around just want to get a sense of it. Yes. All around all around.

O: Yeah. Yeah. Especially the backside now I can feel it. expanding out. Yeah.

Me: The ribs moving on the back as well. Oh, yeah. And notice your breathing. So how is your breathing now? When you realized where your diaphragm is.

O: Okay.

Me: Keep your hands on your lap in front of you. Yeah, just rested. rested in front on on your on your legs. Count now.

O: I think **it's more controlled now**. Oh yeah, what I think okay.

Me: Just keep doing awareness on on the ribs and the diaphragm. And count again.

O: counts

try again.

O: counts

Me: What are you sensing now?

O: I think I'll do again.

Counts...

I can feel the movement. I mean, I can think of it the movement of the diaphragm. Yeah. When I keep singing. I can feel the mean, I can get that awareness of the diaphragm coming up.

Me: Yeah, yeah. Yeah. Nice. So, last week, also, we we saw how if the diaphragm is there, then the lung is on top of the lungs or on top. Okay. So now imagine that your lungs are like two balloons here, okay. Like lung shaped balloons, basically, the one on the right one on the left. Now, the next few times that you breathe, imagine that every time you inhale the balloon. You're right.

Oh, yeah, feeling only the right one. Okay, going straight there.

No, no, just just the diaphragm will do its thing just just concentrate on filling your right balloon with air. Yeah. Notice the difference between the right side and the left side.

O: I can feel something in the the the line kind of expanding more on the right side when I keep on thinking like that.

Me: Correct. Now now fill only the left balloon.

O: Okay.

Me: Yeah, let go and breathe normally now. And now, breathe normally. And notice what's happening. Now, imagine filling both the right and the left balloon with that at the same time.

O: Yeah.

Me: And now just keep that in your awareness and count again.

O: counts

Me: what are you noticing now?

O: I think there is more space now. And I think when inhaling I when we inhale, there is some amount of oxygen still left there. That's what I felt. If like, Okay. Is it like that? I don't know. When I first started thinking about those two sides feeling, yeah. And when I exhale, I can feel like there is some more air left. That is left to be exceeded. Okay. Yeah. I wasn't aware of that. I think. And that's what

O: No, I don't know whether I'm getting it the right way. But that's what I think there is some more air yet to come out.

Me: So you feel like it could it could, it could contract even more ?Is there a change from how you were doing it before? Like if you were sensing the end of your breath as something else before? And yeah.

O:Yeah.

Me: Yeah. Nice. So now how does it feel? Does it feel easier or difficult? Yeah,

O:it definitely feels easier.

Me: Yeah. And how does your voice feel? Does it feel okay? Now, okay. So again, breathe and bring to your awareness, your ribs, moving your diaphragm moving up and down. And then your two balloons filling with air as you breathe, to bring that to your awareness again.

This time, cross your arms in front like this. Like hug yourself. Okay. And breathe now. And notice what's happening.

Just notice

just put your hands down. Is it? Is it difficult? Yeah. Just put your hands down on your lap in front of you

Yes. So now I'm going to make you do some more variations. Okay. So lift your right arm up. And and notice what's moving. What's happening when you breathe like this? Yeah.

O: I mean, this part is more. It's not moving. Yeah, suddenly they stop moving. Okay, and this side is working. Yeah. Yeah. Okay.

Me: And now put both hands down and notice. notice your breathing now.

Yeah. Now lift both hands up. Okay, so lift both hands up this time. So you know, are you sitting on your sit bones? Like, can you feel your bones when you sit? Are you sitting on your support? So just put your hand just quickly put your hands down. So if you move like this, can you feel your bone? underneath? Yeah. So just to check this Put your hand under your butt and just yeah, I can you can feel that. Yeah, yeah. So now lift both hands up. And shift to one side of your support. And breathe on that side. Stay on one side. Just stay on one side for a few. Breathe for a few cycles shift to the other side. Make sure you can still feel that bowl. Okay, on that side. Okay. And breathe in and out. And now shift to the other side again.Put your hands down in front of you. Now just breathe

normally. Not now. Last one. Lift both your hands up. Look at the ceiling. So make your palms face inward. If possible. Make your palms face inward. inward. Yeah, now try. Look. Look up the ceiling. Yeah.

O: Uh huh. Yeah. I can feel the front. I mean, I can only feel the front side.

Me: Yeah. Okay, put your hands down. And now breathe. And notice.

O: I can feel more volume and the buzzing in the ears. I'm wearing headphones so I can feel the buzzing in my ears. So last class I had told you that the initial part the air is going out, now I feel the initial part is better...

Me: Yes. And your voice has also become a lighter quality. Your speaking voice too. Nice so shall we see what has happened with your Abide with me?

O: I was kind of, the first time I sang today I was actually trying to sing the first line in one breath, I was trying to hold as much as I can and sing the whole line. Now when I tried, there is much more air still there..

Me: did you need to try to do anything?

O: no no

Me: so it just happened right?

O: yeah

Me: so do you want to try your song now? And pay attention to what's happening.

O: that was very very easy. I know I can sing more longer if I wanted. So much space...I was trying to see if I can sing two lines in one breath.

Me: nice I saw that. How are you sensing this feeling?

O: while I was singing I was not thinking about anything...

Me: so now this week when you sit down for practice, you can recall these sensations. Now your body has learnt to breathe a different way.

O: can I ask something? What exactly happened during the class? Is it just the awareness that caused the change or some muscle change? What was..?

Me: both!

O: so when I raised my hand?

Me: you were stretching these regions...sides, front and back. Not like an exercise stretch, you are breathing in that position....you are teaching your body to breathe in different positions. So your awareness is really important otherwise you wont sense what is going on. Usually we sense when things get difficult and not what happens in the process. Theres a lot happening in the middle...it becomes an unconscious thing eventually. Did that answer your question? So this week you can recall these sensations...so how does that make you feel?

O: I can play with my voice now...more freedom. So the breath is very important right? Or maybe its new to me im thinking of it that way.

Me: what im thinking is that if the body is well organized then the breath organizes itself...

O; well organized in the sense?

Me: like your system and parts...

O: anatomically?

Me: like a car which requires gasoline to run, if the car is in good condition then the whole system works well. Like the last week your system organised itself, your body had learnt a better way of sitting, organizing..we are an organism, and everything inside is not stuck. The breathing worked better as well.

What are you thinking?

O: I was thinking about how I sang first time for the class last week...it's a lot different now.

Me: yes it will be interesting to see what happens next week.

Participant 5

Lesson transcript Jijo 1

Me: Hi Jijo and welcome to the class. Thank you agreeing to be part of this study. Ummm I received your, the questions that you had filled out for me.

J: Mmm hmmm

Me: Yeah it was very interesting, your answers were very interesting.

J: Thank you

Me: So there were a few things I wanted to ummm ask you.

J: Okay

Me: So ummm you'd said that errr you practice using videos?

J: yeah

Me: Youtube videos and you also said that it was important you find the right exercises for a person's vocal training.

J: Yes!

Me: So how do you go about that?

J: Like I usually don't go for much complicated exercises, because I'm afraid whether it would give me the best results or not. So usually I go for some sort of a breathing exercises or something like that or errr yeah that kind of exercises only. I like to improve my range sometimes. Like towards Highest notes and towards lowest notes. Yeah that's it. Nothing much.

Me: Okay. Yeah and how often do you practice?

J: Mmmm as of now I'm busy with my work so I don't get much time for practice. Usually atleast on festival seasons you know, like Christmas alone I would spend err probably one hour or so ummm practicing. Maximum.

Me: Okay okay. And how do you know, when you are using the Youtube videos and practicing etc, how do you know you have learnt a particular skill?

J: Like ummm if I'm able to accomplish that, example, in breathing kind of exercises, they are asking me to hum for a lengthier time, so like, if I was able to do it for 15 seconds or so before and now if I'm able to do for 30 or 35 seconds probably, so I'm doing good right?

Me: So you see it...if you see it in your singing, then you know that you have learnt the skill.

J: yes yes yeah.

Me: Okay. You had mentioned that you'd had some disappointing experiences during performance related to errr breath management. Could you tell me more about that?

J: Yes. Actually when I'm learning some sort of new songs, especially with the choir, errr there will be better singers than us and they will be practicing regularly. In that sense when I'm joining them.

Those kind of you know, those kind of good singers, sometimes it would be somewhat embarrassing for me. They are doing it better and I'm not able to cope up with them.

Me: Okay

J: Especially when the breathing issues happen, like errr they are singing something like a lengthy, what you could say, lengthy err portion of that song, sometimes I may not be able to hold my breath towards the end. That makes my voice a bit (inaudible)

Me: Yeah. Sorry what did you say happens to your voice when you lose your breath?

J: Yeah actually definitely it's like errr I would not you know try to break in between. I will try to finish off the words, the lyrics.

Me: Yeah

J: And then only I would break that. But still you know, I won't be comfortable with that. To stop in between and taking a breath. Like all others are doing it and I'm the odd one out. Especially in a choir.

Me: Yeah yeah. Ummm and also you'd said that errr with regard to learnin technique, sometimes lessons are not that captivating for amateur singers.

J: Yes

Me: So what in your opinion is a captivating lesson? For somebody like you?

J: Youtube lessons I think, it is more like you know, it is more generalized. They are keeping a particular group of people in their mind. Or they might have prepared lessons in accordance with the people they are in contact with. So as an amateur, for me, like I don't think like errr, someone without knowing me or my capabilities could train me well.

Me: Yeah

J: So sometimes I felt like that. Some of those exercises I had started with them and then had to drop in between. So this also happens with me.

Me: Yeah yeah.

J: So it's more like, it would be more better if the person or the trainer knows us personally.

Me: Yeah and start at your level and then move from there.

J: Yes exactly.

Me: Yeah yeah definitely.

Awesome so now before we begin the lesson we will have two references. Okay. And we revisit these references at the end of the lesson when we when we work through the vocal task. Yeah. Okay. So the first one is, we'll sing the first verse, abide with me. Okay. I'll give you the key. So just take it. And while you're singing it, make a mental note of how easy it feels to sing. how comfortable you are feeling. And generally, like an overall note of, you know, yeah, just make a note of that. That's the key.

Yeah. So have a have a mental picture of what that felt like, for yourself. Okay, so we can revisit the next thing. I'll give you a note. That's the middle C. So on that note, on one exhale, please. Count in the timing of thinking seconds clock. So I'll do 12356 and so on. And say, you can count on one exhale.

J: Okay. Yeah,

Me: I'll give you the note.

J Okay, shall I?

Me: Yeah.

J: counts

So this will keep that as your initial count. And then we'll work through the same exercise four times. So great. So during this lesson, I'd like you to pay attention to everything that you're doing. Okay. So to what is happening? Yeah, generally to the task, what you're doing. Okay. Let's try this again. So I'll give you the note. Count again. What happens, okay.

J: COUNTS

Me: Yeah, try again. Okay.

J: Okay. Counts

Me: Yeah, let's check you're not

Yeah, you're on pitch

So now before we try it again um attention to how you sitting? How you are? Yeah, you're using your instrument. So pay attention to that when you're singing. Try it again.

J: COUNTS

So now sit, sit in a comfortable way in your chair. So then back Now put your hands on your lap. Okay. Yeah. And, and pay attention to how this feels...Yeah, try again. Okay, okay.

J: COUNTS

Me: So how much was that? Yeah. Try it again.

J: Okay.

Yeah. So what did you What are you noticing? back? Yeah. So what are you noticing?

J: Yeah, actually, it was like when we, when I was practicing, like, the timing was improving the beginning, but I think if I'm doing it more like continuously, I think, again, it would start decreasing the time. I think like that, like, I went up to 39 then slowly started to decrease and I'm like, 3035 like that?

Me: Yeah. So yeah, um, is it? Is it? Why do you think that is happening? Are you able to sense anything differently?

J: Yeah, probably. Because certainly, I was having such an issue before. So I mean, a slight cold so that that would be the problem for them. Maybe. But yeah. Otherwise, that when they practice this before, the time went on improving, and I have noticed before,

Me: yeah. Now, um, so sit again, in a nice, comfortable way. And make sure that you're not leaning back or hunching forward and sit on the edge of your chair. So that you are Yeah, without any. Yeah, without any support is sitting balanced. And imagine that your torso. your torso is like a six sided box. So the sides would be the top and then Front, back two sides. And so imagine a six sided box and that your torso has six sides like that. And notice when you are breathing, which of these six sides are moving when you breathe. And notice which of the six sides are moving when you breathe? And which sides are not moving at all when you breathe? Yeah. So which sides are moving when you breathe?

J: Yeah, I said I feel like the top the top of the top as in you're like the top. Yes. Yes, yes.

Me: And what else is moving when you breathe?

J: Oh, maybe from the front side? Yeah, the whole of the front side. No, I mean, yeah. My my chest portion.

Me: Okay. And which are the sides which are not moving at all.

Yeah, and the rest of the sides. What what's happening With your what's happening with your back, what's happening with your sides?

J: Nothing.

Me: Okay. So now, can you so when you're breathing now? Yeah, the sides which are already moving Well, when you please. Yeah. exaggerate that. exaggerate that for a few cycles. Yeah.

Yeah. Thank you. Okay, and now just breathe normally. And again, notice pay attention to the six side, six sides and see if anything has shifted, or if anything has changed.

J: Yeah, I think I'm not giving that much stress now, as I did before, like, to TJ Yeah. I'm not giving that much stress. Now I need to pay like, and. Yeah, so it's not the size. I mean, the top I'm not using that much. It's not that much.

Me: Yeah. And what about the sides, which we're not participating that much, which we're just resting what's happening to those? Yes.

J: Same, same.

Me: Okay. Yeah.

Now, the site those sites, which are not participating in your singing, so for the next few inhales Yeah, exaggerate those, so don't use the portions which are already moving. Yeah. Instead use the portions which are not moving. Use that and just see how that feels. So you're back. Your sides?

Okay, now just breathe normally. And what are you noticing?

J: When I was engaging those portions I wasn't that comfortable.

ME: But now when you normally do you sense any anything has shifted.

J: Yeah, I feel comfortable. Better, like better than before.

ME: Yeah. So again, a pay attention to the six sided box.

J: Okay.

ME: And now notice what is moving. Okay. Compared to the first time you noticed it?

Yeah, I believe my front side of things moving on me. Yeah,

Me: yeah. And what's happening to the back and the sides

J: resting normally.

Me: Yeah. And they are not. Still they're not participating in the breathing. No. Okay. Now, try, keep this 6 sided box in your awareness. Okay, and count again. So I'll give you your note. Okay. So pay attention

J: counts

Me: Yeah. Try again. Yeah.

J: COUNTS

ME: try one more time.Yeah. So what did you notice them? Your numbers have increased?

J: I think. Yes, definitely. Yeah. Yeah.. Now maybe after because of the sessions. I think, though I feel relaxed. Like before, it was like 27 or 30 now it's like, it's more comfortable. Yeah.

Me: Yeah, yeah. Good. Now in your imagination, okay. Imagine a big beach ball. Okay. A big, big beach ball. And imagine that you're Imagine that you are that big beach ball. Okay. And as you

grieve as you start counting, as you start counting, imagine that the beach ball is steadily deflating. Okay? steadily and evenly deflating. Okay, imagine that and then when you read, it comes back to its original position. Okay, okay. Just imagine

J: COUNTS

ME: Try again. Let me let's keep 40 as our target

J: counts

Me: Yeah. What do you see now?

J: Sorry,

Me: what are you noticing now?

J: Yeah. In terms of, you know, breath control, I think it is no better. Like, I'm not kidding that but **no stress now.**

Yeah, but before Yeah, to my lungs. So that's the first thing I noticed. Even at first when I was counting up to 35. I was feeling that my lungs are almost empty. But now it's up to 40 or 41. Still, I think if I push the tonic more than I did want to.

Me: Yeah, yeah. Yeah. And were you thinking about deflating beach ball? Yeah. Were you thinking about that?

J: Yes. Yes, exactly. Yes, exactly.

Me: Yes. And where you are now pay attention to what is happening? What is happening in your body? As you were thinking of this, each call, so you could, you could close your eyes this time. Close your eyes. And imagine the beach ball in your head. The feeling? Yeah, and notice what's happening.

J: counts

Can I do that again? Can I do that again?

Me: Yeah, do it again

J: COUNTS

ME: Yeah. And when you like having your eyes closed now. Yeah, I think that came up in your attention, which you hadn't noticed before?

J: Yeah, I think. Yeah, it was like, now I feel like how much I have left. How much more could I have? And it doesn't seem that way. So I know how much is left inside. Yeah.

ME: Yeah. And do you think that helped with your breath management? Yeah.

J: Yeah, definitely. That's literally what's, you know, how much metal is left in there? So it's like, if I want to break a line or something, I could do that. So yeah.

ME: Yes. And now just think of this deflating beach ball again. And make hissing hissing sound like a as the air goes on. So instead of counting, just let the air out like that.

Can you hear me now? Yeah. Yeah.

J: You want me to you? You want me to? You want me you don't want me to count right?

Me: No, don't count. Just make the more noise. The hissing noise. Yeah, don't don't don't count. Just be aware of the like the air going out and how body is getting deflated. Like the beach ball getting deflated. Keep that and pay attention to what's happening. Yeah. Are you paying attention to what's happening? Yes videos when the air is out. Yeah. Yeah. Is that is that similar to what's happening to when you are counting?

Count again

J; counts

Me: I noticed that you were aware of when you were topping up. Right lets go back to abide with me.

J: I noticed myself topping up

Me: what did you sense compared to the beginning?

J: EASE...no strain or stress...

Me: that was really nice. So what do you think you have learnt?

J: actually I was doing a great mistake at the beginning by taking in too much air and stressing myself...I think I realize that now.

Class terminated due to poor internet connectivity. His comments were sent through email, which is attached in the appendices.

Lesson 2

Me: Hi, Jijo, welcome back for the second lesson. Um, so tell me what, from what we did last lesson last week? How has that learning been useful for you last week?

J: It was quite useful. And I found some time to rehearse that or practice that last week. plus three, four times I did that I was a bit busy with my work. But see, I try to do that three or four times last week. So I felt comfortable. I do believe that, you know, day after day, like when I was doing it personally, day after day, it was I was getting easier to sing.

Me: Yeah, yeah. So what did you do in this practice

So what exactly did you do in these practice sessions?

J:: Actually, I was trying to manage my breath. From the beginning, and a class. Also, you know, I was managing the breath. I started with managing the brother class, I found that my voice quality is also a bit increasing than before. I think it is not stressing out when singing is being easy.

Me: Yeah, yeah. And so have you noticed anything in your singing? So you're saying that your voice, your tone has also become better? That's what you said now?

J: Yeah, yes, yes. Yeah, yes, yes. After practice, sessions have noticed that it has become better than before.

Me: Nice.

So were there any questions that came up for you, in your mind as during the last week, regarding anything we did?

J: Not actually, that. I told you, I didn't have much time to leave us with that because of my busy schedule. I think Steve was I was able to do well. So I think if we are if you're able to do that on a regular basis, it would be much beneficial for us.

Me: Okay. Okay. Awesome. So let's go back to our reference counting. Yeah, so just to see where you are now. I'll give you the same note such as count and let's see where it is now. Yeah.

J: Should I

Me: Yes

J: counts to 30

Me: Yeah. Yeah.

And let's do your abide with me. And see where that as well.

Yeah, nice. So I can notice the difference. Yeah, you're able to breathe through the lines. And stop where you wanted to stop and sing through

J: Yes. Yes.

Me: Nice. Very nice. So, um, can you take off your headphones? recording? Yeah, I can hear you better now. Awesome. So we'll go into today's class. Okay, so, um, sit in a nice, comfortable way so that you're not leaning forward or hunching forward, or you are not leaning on the back of your chair. Okay, and you may place your hands on your legs in front of you. And your feet. Make sure they are flat on the ground in front of you and not crossed or tucked under the chair.

And in this position, as you are breathing, try to sense where your diaphragm is. So when you think it is. So, during this lesson, if it helps you, you may close your eyes if it helps you to pay attention. And, yeah, so trying to sense where your diaphragm is, its size, how big you think it is, and where it is located in your torso. So try to get a sense of that. Also sense your ribs moving as you breathe along with the ribs sent to your sternum. So your sternum is this bone that's right under your collarbone. So that's where the ribs come and attach in front. So that flat bone in the middle. So that is your sternum. So censorious and your ribs moving as you breathe.

And once you have a sense of that, keep your attention on that and sense what is going on and count again.

J: counts to 30

Me: Try again.

J: counts to 34

Me: Okay, using your fingers. Yeah, using your fingers, find the lower edge of your ribs. So if you poke around, you will be able to feel where you're at. Okay, so start from here where the ribs meet the lower ribs. And then from there, poke your way down, all the way down, and then all the way down to the back as well. So find your rims, feel the door edge of your ribs, even at the back where it attaches to your spine. So once you feel that come all the way from the back to the front as well.

Now sense how that low edge of the ribs moves.

Now you're able to sense it moving that that portion? Yeah, well, now your diaphragm, the edge of your diaphragm is actually attached to the lower edge of your ribs. So the portion which is touched now, that's where the knife is attached inside. Then from the outer edges in the middle, it goes up like a dome. It rises up like that in the middle. So it's attached to the corners of the ribs, the lower edge of the ribs. And then in the middle, it goes up like like that. So now Where do you think keeping that distinction in mind? Where do you think your diaphragm is? The bulk of your diaphragm?

So can you show me with your hands where you think it is? Can you show me with your hands? Where you? Yeah, so where do you think show me with your hands where you think your diaphragm is?

Okay. Yeah. So that's, so that's where it is attached where you're showing. And then it rises in the middle and comes up to about there. Yeah, around there. So the bulk of the dome of the diaphragm is here. So if you interlace your hands this way, and keep them in over here. Yeah, a little higher. Yeah. So when you inhale, it goes down like that. Yeah. Exhale comes up again. Inhale. Exhale. So as you inhale the ribs, the lower edge, everything opens up as well. an accent so it flattens as you inhale. And then as you exhale, becomes a dome again. Yeah. So it, it does this action as you inhale, and then exhale. So now you can put your hands down. And you can sense as you're breathing now, get a sense of your diaphragm now and see how that feels. Yeah. Now notice your breathing. So as you're sensing your diaphragm, how are you breathing now, so just get a sense of that.

J: At first, I smile because I don't I was putting some stress on my belly or something like that.

Me: Sorry, you're putting a stress On what?

J: On my on my stomach. I thought you know, I was I still work I thought I was you know, doing some pressure over there.

Me: Yeah.

All you're thinking about is your diaphragm moving up and down. Just notice your breathing. Just in your awareness, keeping this. Everything what's happening now in your pay attention. And count again. Okay, try again.

Okay.

What are you noticing now? Did you notice then?

J: Yeah, actually. I think before as I told you before I was, you know, like, making my muscles really rigid. In my stomach. I was playing some stress on that. But no, I felt it is more freedom, especially the second time.

Me: Yeah, yeah. So how is your breathing now? different to how you were breathing at the start of the lesson?

J: Yeah, I believe I could. You know, I could hold more breath inside me though. That.

Me: Okay. Yeah, yeah. Right.

J: And exerting some pressure by making my muscles stronger. muscles, but now it's totally free. No Pain.

Me: Yeah, yeah. Nice. So we'll do something else now. So if your diaphragm is here, at rest, then your lungs are on top of that. Lungs are above the diaphragm. So your lungs sort of finish that by your life and begin where your diaphragm is that your lungs are done by that. So imagine that you have two balloons, okay. One on the right side and one on the left side. So they are lung shaped balloons which are above the diaphragm. Okay. The next few inhales. The next few breath cycles when you are inhaling. Imagine that you are filling only the right balloon with air.

And now breathe normally. And notice the difference between your right side and your left side.

So now imagine that you are filling only your left balloon with air.

Now breathe normally. Now imagine that you are filling both the right and the left lung with air at the same time. So both balloons are being filled at the same time.

Now just breathe normally. Breathing and keeping your keeping your attention. Yeah, and being aware.

J: counts to 37

Me: Count again. One more time.

J: counts to 43

Me: Did you notice then, when you were counting?

J: I feel like that was... what I felt when I know how much air was inside...

Me: yeah. And how did it feel to breathe

J: easier easier than ever

Me: Nice. So now, bring your awareness, attention back to your breathing. So notice your diaphragm, your ribs moving. Notice just moving. Notice your both the right and the left balloon filling with air. And then in front of you and continue to breathe. And notice what what's happening.

Take a moment.

Yeah. Now put your hands down. Normally, your right hand up. Notice what's happening to the left side. Yeah, put your hand down and lift your other hand. Now raise your hands up. This time, move to one side, shift to one side. So if you're sitting your shift to one side, yeah. And there for a few breath cycles on one side. So pretty. Are you able to feel your sit bones like your bones when you sit? Are you able to feel that? So let's put your hands down quickly. Just put your hands down and put your hand and sit on top of so just take your hand and sit on top of it. Okay. Are you able to feel a bone poking down on your hand?

J: Sorry, am I able to feel a bone?

M: Yeah. So when you take your hand out, are you able to feel that those that that bone on each side on your chair. So just take your arm out now? I able to feel that. So that's your sit bone so you can actually shift on that bone from one side to the other. You'll be able to feel the bone when you shift. Yeah so yeah Go back to the other side. Now move to the other side again. Put your hands down normally. And one last one. So put your hands up. Look at the ceiling. Put your hands down gently and just breathe normally now.

I just noticed your breathing. Just notice it. Keeping your breathing and your awareness count again.

J: counts to 35

Me: One more time.

J: counts to 40

Me: Yeah, so what did you notice that? Yeah, yeah.

J: bigger lungs!

Me: And how has your breathing changed since the beginning of the lesson?

J: Its getting easier..

Me: Yeah, yeah. Cool. So now, again, noticing your breathing. So just exhale on an S. So just go ssssss...

J: counting or something?

Me: No, just just exhale. Just let it out.

And now on top of the s, so it will like this ...zzzzz. So it's an S, you start with an S and then you add a Zed On your same note.

J: After after. I mean once I finished my breath again, I started Zed, right?

Me: No, no, it's happening at the same time. start with an S for a couple of seconds. And then you add the Z On top.

Add the Zzzz

Yeah. So did you do it on this note? Now keeping your attention switched on, count one more time.

J: counts to 38

Me: Again,

J: counts to 38

Me: yeah, so what have you noticed then?

J: I think you know I can control it. I know how much is left. It's not cutting off by itself, rather I know how much is left.

Me: and how are you sensing the movements now as you are breathing?

J; My lungs are getting bigger, I could clearly know it...my diaphragm moving...I feel better now...I know exactly how to inhale.

Me: nice! Let's see what has happened with Abide with me.

Yeah how does that feel now?

J: I was comfortable to sing slower

Me: yeah you weren't in a rush to finish it quickly..

J: No no...and my inhale was much shorter...short breaths in between to complete the lines...I didn't do that before...

Me: so you are able to sense what is happening clearly? Nice. So are there any questions coming up in your mind right now?

J: Actually I wanted to ask you...is it necessary to do these exercises regularly ...like everyday? Or once or twice a week?

Me: its important to practice because, what we do often is what becomes a habit. So that's why musicians practice a lot, because they want to make a behaviour automatic and unconscious...so ingrained into your system that you don't need to think about it during a performance. During a choir rehearsal, you are rehearsing with a bunch of people, so your personal practice should be done by then. So when you are moving to a performance situation, you should not be telling your instrument what to do...you should be concentrating on blending, expression...artistic considerations happen at that point. So practice is for making things automatic and unconscious.

J: so its better to practice everyday right?

Me: yeah, so they say a singer should not go more than 3 days without practice. Your muscles lose its...you can compare it to exercise...if you don't exercise for a week and then exercise again in the same intensity, your body doesn't cooperate. And it takes time to get to that level right? Its all connected right...

J: One more thing is about position, sitting or standing, ive heard people say you must sit this way leaning back etc...so it's a bit confusing...

Me: today what did you notice about your position?

J: Yes, like this...

Me: that position allowed you to breathe and move freely right?

J: Maybe because I don't sit this way often, I was conscious about how I was sitting...

Me: yes it will feel different...

J: I could feel a clear difference...thing is I was conscious...that I was supposed to sit this way

Me: if you sit this way everyday and become more aware and attentive to it...then it will become normal at a point...

J: And when I stand?

Me: it will translate to standing as well. So imagine your sitz bones as your feet when you sit down...so you are not changing anything...just try it now and see. Sit and feel your sitz bones. Now you stand...do that a few times to feel the difference. Sit and feel your breathing and your sitz bones...and stand and notice your breathing.

J: yes yes I can feel it.

Me: when you are practicing, its about recalling what you learnt now. Rather than doing it as an exercise, **recalling the sensations** is more helpful. That's what I asked so many times how did it feel? So that now you know how it felt..

J: **I could really feel the difference after the exercise..**

Me: notice how you are sitting during the day, while you are working, recall and do things in your imagination and it wont feel so alien when you come to singing. Pay attention to whats happening during the day...is that making sense?

J: yes that's something that I can actually do...when im waiting online...

Me: yeah it will make you feel better as well...relieves aches and pains. If you have any other questions, feel free to email me.

POST – LESSON QUESTIONNAIRES

Post-lesson participant questionnaire

1. What are your main take-aways from the lessons?

2. Have you noticed any changes in your singing/use of the voice since the lessons?

3. During the lessons, what did you focus on when teacher feedback was not given to you?

4. What did you learn about your own breathing, both after lesson 1 and lesson 2?

5. How will the above learning affect your singing and practice in the future?

6. Any other comments

Signature

Participant 1



Blesson Joseph

to me ▾

Jan 2, 2021, 8:59 PM (6 days ago) ☆ ↶

1. The use of certain muscles that I never used before in the process of breathing is vital to having control of your voice. Employing proper techniques of breathing like the balloon analogy, six sides ensure that I am not worried about breath control while singing.
2. I feel there has been a drastic change in the use of my voice/ singing. Earlier I was very tensed about not having adequate breath while singing. This resulted me going off-key while singing. That to a certain extent was ratified through this class.
3. I tried to intentionally remember the points and techniques we had discussed and made sure that I was employing them while singing.
4. I learned that I was not using all the muscles that I could've been using while breathing. This resulted in not being able to sing well.
5. This new learning was an eye-opener for me. It has totally changed my view of breathing and using proper breathing techniques. This was immensely beneficial in ways such as stay on key while singing and also being able to sing a long-phrase when needed.
6. The class was immensely helpful for me. It introduced me to certain aspects of singing that I was previously ignorant of. I also felt that through this class, I understood the importance of employing the knowledge that we attain from studying physiology as very crucial to singing.

Participant 2

Post-lesson participant questionnaire

1. What are your main take-aways from the lessons?

- > Using mind and body connection in singing.
- > Got an awareness how my body works while singing.

2. Have you noticed any changes in your singing/use of the voice since the lessons?

Yes, I felt my voice has become louder and bolder. Tone also improved.

3. During the lessons, what did you focus on when teacher feedback was not given to you?

I focused on how I was breathing, which all parts I was using, and was more attentive than casually singing.

4. What did you learn about your own breathing, both after lesson 1 and lesson 2?

I got to learn the technical ways as in, how the diaphragm is working which made me ease in taking breath and singing long phrases. Singing became effortless.

5. How will the above learning affect your singing and practice in the future?

Singing became easier. Especially long phrases. More awareness of proper breathing. Mind body connection really helped.

Post-lesson participant questionnaire

1. What are your main take-aways from the lessons?

- * Awareness about breathing dynamics adds to the quality of singing.
- * Understanding the meaning and depth of the lyrics of a song helps in better song delivery.

2. Have you noticed any changes in your singing/use of the voice since the lessons?

Yes.

- * I'm able to sing more comfortably towards the end of a long note.
- * Pauses while singing have come down.

3. During the lessons, what did you focus on when teacher feedback was not given to you?

- My focus was on controlling my breath without having to take frequent pauses.
- also, paying attention to the breathing movements.

4. What did you learn about your own breathing, both after lesson 1 and lesson 2?

- I was less aware of my breathing before.
- more frequent pauses were brought down.
- I could feel the transition from shaky notes to deep, effortless, steady notes.

5. How will the above learning affect your singing and practice in the future?

- This will help me in singing with more ease and precision.
- Singing will be a lot more effortless with a better control over my breathing.

6. Any other comments

- I'm really grateful for the opportunity.
Looking forward to more sessions in
the future. ☺

Signature

Participant 4



Olive Abraham

to me ▾

Sun, Jan 3, 6:01 PM (5 days ago)



1. What are your main take-aways from the lessons?

My knowledge about breathing was wrong and I was able to understand it the right way.
Need to practice more.

2. Have you noticed any changes in your singing/use of the voice since the lessons?

I could feel that my duration of the breathe as well as the control over the voice has significantly improved.

3. During the lessons, what did you focus on when teacher feedback was not given to you?

I tried to focus on the thinking pattern that was discussed during the class.

4. What did you learn about your own breathing, both after lesson 1 and lesson 2?

If you get the breathing correctly, you are more in control of the song and can play around with the song.

5. How will the above learning affect your singing and practice in the future?

The lessons were very liberating for me as a singer. I could understand the importance of breathing and the need to work on it.

6. Any other comments

Great opportunity to be part of the lesson. The lessons helped me in a great way to understand about breathing.

Participant 5

Post-lesson participant questionnaire

1. What are your main take-aways from the lessons?

In such a short period of time, I have learned an excellent and highly beneficial technique in singing, that I believe improved the quality of my singing, and above all my confidence, as I am very well aware of how long I could sing at a stretch. I feel it appealing because it does not take much time or equipment to ~~prepare~~ prepare myself, other than a few stretches and breaths. To encapsulate, I have developed a new habit in singing.

2. Have you noticed any changes in your singing/use of the voice since the lessons?

After the sessions, I have become pretty aware of how long could I sing while singing a long phrase. Moreover, compared to the past, I feel that I am not exerting any stress on my body while singing.

3. During the lessons, what did you focus on when teacher feedback was not given to you?

My complete focus was on the movements of my body, especially torso, and my breath.

4. What did you learn about your own breathing, both after lesson 1 and lesson 2?

It is not necessary to stress myself while inhaling, rather make awareness about jutting my lungs to the maximum. I have also learned to warm-up myself by small exercises taught, for better results while singing. By the second lesson itself, I was well aware of how to breathe efficiently, and was scrupulously able to self-correct the mistakes I made while breathing.

5. How will the above learning affect your singing and practice in the future?

Overall, it was a wonderful session that helped me to sing easily, and I wish these simple techniques reached many people who loves to sing, resulting in improving their confidence and quality of singing.

The effect will be in three ways I think. One is, improving the beauty of the song by not taking undesired breaks while singing, due to shortage of breath. Secondly, the techniques learned would definitely help me to sing for a longer time, as I need not stress my body

while singing. Finally, it unknowingly improves the quality of my singing.

6. Any other comments

Overall, it was a wonderful session that helped me to sing easily, and I wish these simple techniques reached many people who loves to sing, resulting in improving their confidence and quality of singing.



JITO JACOB THOMAS
Signature

Reflective journal

10/12/2020

Using FM helps the student

- To explore movement options which cannot be described using words. These sensations would help the student while practicing a certain motor task – in a complex motor skill like singing, it is impossible to describe the feelings in the vocal tract while using words – attempting to do so would cause unnecessary tension and effort.
- How do I fit in everything into one session? What does the singing teacher do if they are not trained in any somatic work? Use small ATMs from available resources?

When the student is trained to be sensitive to sensations, then it makes sense to withdraw feedback about KR/KP and allow them to use their attention and awareness instead.

11/12/2020

There seems to be several options available to do somatic learning. However, I'm not sure if it is feasible for any of my students to find a practitioner in India. Even if they did, the somatic work might or might not translate into their singing. So it seems necessary that I incorporate whatever possible, maybe ATMs readily available, which does not require training or expertise.

12/12/2020

If a singer with a habituated pattern was given a choice of a better way of doing things, would they not take it? As a teacher I'm helping them experience the different choices available.

- Power of choices
- Working in collaboration with the student rather than telling them what is 'right'
- Respecting the students perspective

16/12/2020

Blessons lesson this morning – the ML based lesson used principles of attention, infrequent feedback which was slightly delayed, desirable difficulties by setting a goal/target and transition of attention from body mechanisms to imagery. When he focused on what was happening and was really present, then the trials were much more goal-oriented. He seemed very pleased with the outcome of the lesson. Pre-attentional interest in breathing. Volition because of the relevance it had to his singing. With regard to learning new skills, he felt he noticed only when someone pointed things out to him. By the end of the lesson, he was paying attention and was more aware than he was before. When the singer 'knows' that they can really do a particular skill, then there is a reduction in general tension/anxiety and they seem more free to 'concentrate on the song'.

Sajeevs **lesson was messy but packed with learning**. When he 'turned on' his attention, **he realized** that he had been holding his breath – something that felt familiar, making me wonder if it was a pattern? There was one point in the lesson when he could not go back to his old way of singing, neither could he automatically breathe the new way. It will be interesting to see how his system learns over the next two weeks. He has been assured that this messiness happens during a learning process, in order to alleviate his apparent discomfort.

17/12/2020

Jijos lesson went well today. He didn't seem very aware of his body. However, after the mention of the 6 sided box, he began to notice tightness in different places of his torso. Part of the tension seemed to arise from wanting to take in a lot of air and attempting to hold it in. used the strategy of counting three times without topping up extra air. **He sensed the difference** by the end of the lesson. He used his watch as a metronome and was focused on that more than his body. Can be clock be considered as an external focus of attention?

18/12/2020

Olive's class was fun. He is an experienced singer and only needed some guidance in order to understand what was happening and to pay attention. I was a little concerned that he felt things had to be manipulated in order for it to be easy. There could be a danger of tension in the body when that happens.

19/12/2020

The participants seemed to have a **limited idea of what to pay attention to** during the repeated trials. **They needed to be guided** to the different areas of the body to notice what was happening. Some of them caught on quickly and noticed things – seemed to be more advanced singers who had taken lessons before. Even then it was a **subjective attention** – to things which they had paid attention to before. The attention was not global to the task and there were blind spots which had to be called out. The feedback had to be asked as questions to get them to notice. If an external goal like reaching a particular target number was given, they were only reinforcing old behavior and trying to achieve the set goal. If repetition is essential, it seems almost futile to ask the singer to repeat a given motor task in the hope that they 'may' eventually notice what is happening and correct themselves. One of the participants asked at the end of the lesson how the counting had changed her voice quality and breath management, as she had not perceived the connection between the change in voice to the change in body use. even the advanced singers had not made the connection. If the perception of such change is not present, even if the performance of the motor

task increases, then how would the singer be expected to practice correctly on their own between lessons?

As a teacher I almost felt bad for the singer who was trying really hard to get it right but was unable to sense what I could clearly see was happening. Would it have helped if I had just told them instead of waiting for them to notice it themselves? Does not such feedback make the singer overly dependent on the teacher?

22/12/20

Reshma- lesson 2 – Reshma looked very excited to attend the lesson today. She noticed that there were changes in her singing during the week. Her count had stayed almost the same compared to the end of the last lesson. During the course of today's lesson, she began to be aware of more and more. At the end of the lesson, she made a mind-body connection to the changes in her voice as well. today she didn't need much prompting to become aware of movements and sensations.

Blesson Lesson 2- When Blesson arrived for the lesson, he seemed pleased that he had begun to practice on his own. There seemed to be a bit of tension in his singing during the reference, which he himself realized by the end of the lesson. It took a bit of time for him to begin sensing what was happening in his body and he was more goal oriented and trying to get the maximum number. He sensed his body relaxing and felt the second lesson solidified what he had learnt in the first lesson. Tactile sensing of ribs at the back and the diaphragm helped mobilize his back muscles.

-In both of today's lessons, the number of trials was much lesser compared to the first lesson.

-I could withdraw my feedback knowing that I had directed them to what they can pay attention to. Eventually they were keen to tell me what they had sensed and observed and did not ask me for my feedback.

31/12/2020

The retention test results were quite varied. Reshma and Jijo did no warmup before the test and only 2-3 practice sessions between the lesson and the test. The learning seemed quite embedded .

Blesson and Sajeev- were not doing the old patterns anymore.

Olive seemed very frustrated that the same feeling of ease had not sustained. He mentioned that he had not done any practice by himself and had only been singing with his choir.

The people who hadn't been singing like usual seemed to have the most benefit or increased results during the retention test. What would this mean for regular performers?

Although I knew that the learning process is messy and that same patterns of retention may not be observed in all the participants, I was still a bit frustrated seeing Olive's retention test results. Maybe I was hoping to see an increased retention after the somatic based second lesson in all participants. Although quality and understanding wise, the participants commented that the second lesson was clearer and more useful for them, somehow the retention test numbers did not show any steep increase. Although after the first lesson showed high retention for Blesson and Olive, both of them had commented that they felt tension in their body while doing the test. Although the second retention test numbers were lower than what they had achieved during the lesson, the body tension had decreased and the quality of tone and pitching had increased and was evident in their singing. So I'm not sure the counting task alone can be considered as the test for retention. It seems like the 'know what' of the first lesson was translated to the 'know how' of the second lesson. And once they 'knew how', they didn't need many repetitions or practice to recall the sensations/ learned skill.

3/1/21

Ways in which my teaching has changed since the start of this research project:

- I have reduced my talking during a lesson – the student sings more/explores their voice more/ observes and reports.
- I wait and consider if I need to give feedback and if I do, I take a few seconds to consider what to say. Ive also noticed that I give feedback in the form of questions, mainly to see if the singer has become aware of what I'm noticing.
- I 'tell' the singer only as a last step, if nothing else has worked and this is very rare.
- If there is a student with a particular habit/tension, then I try a somatic lesson with them instead of trying to fix the problem by asking them to stretch or relax.

Analayical Memos

17/12/20

- There seems to be a trend of watching youtube videos to develop technique and to practice
- Singers awareness differs in degrees. Their attention to what is happening is crucial in making changes. But if their awareness if not comprehensive then they don't know what to pay attention, I think.

18/12/20

Singers seem to know the importance of practice/repetition in order to improve, from reading their pre study questionnaire replies. The other crucial thing required from them is paying attention. Out of the 5 participants , none of them seemed very bodily aware and usually waited for others, like a

teacher or another experienced singer to give feedback and suggestions. Their practice routines seem sporadic and increases when a performance is coming up.

23/12/20

Pedagogues like Janice Chapman have said that going for singing lessons should eventually improve a singer's posture as well. If that falls on the singing teacher, then it makes sense that I'm teaching the singers whole instrument.

31/1/20

Really frustrating that I do not have a few more weeks to track the learning in the participants.

2/1/21

My research study is related to how singers learn effectively and retain their skills. This arose from the fact that I seemed to be teaching the students the same thing over and over again in the lessons. They seemed to be forgetting or not capable of reproducing of what they could do during the lessons, while they were on their own practicing. It was frustrating both for the teacher and the student.

I'm really happy to see the overall results of the study because it shows that everyone has learnt something and no one complained about not being able to recall the information during their practice. In fact they said it was pleasurable and easy to practice now.

I'm aware that there is no single factor which contributes to a singer learning well. In fact, there are many factors like attention, feedback, multiple trials and volition which are necessary during the lesson itself, all working in a balanced way enabling the nervous system of the student, which is primed and prepared to process and learn new skills.

3/1/21

During the course of this study, I've become deeply aware of the fact that in order to be a good voice teacher, it is necessary to be empathetic to the student – the insecurities, fears, anxieties and hopes they bring into their lessons. Sometimes I find that students are so conscious of their sound and their voice and have a difficult time getting out of their own way. During such instances it seems really important to work with their nervous system rather than through their conscious self. I'm beginning to understand that no singer ever truly 'arrives' at a state of perfection. The learning, the practice and the honing of the skills is relentless and if not interesting and captivating and not relevant to their current situation, as one participant pointed out, then there is a lack of interest to pursue that line of excellence. As the human body changes, so does the instrument as a whole and

what served the student before might not be efficient anymore. The exercises which gave great results in their youth may not produce the same results just by repetition in later years.

Although all my participants had varying levels of singing experience, I tried not to classify them as beginning/intermediate/advanced singers. Although the exercises I chose were the same for all the singers, there were some interesting results. In lesson 1, the beach ball analogy and setting of a target was useful for participant 1 and 2. The mention of somatic aspects using the 6 sided box analogy helped all participants. By the end of the lesson 1 for all participants, I noticed that the learning which came out was different for each of them. I was tempted to find a different somatic lesson (FM ATM lesson) for each of them, based on what I perceived they needed to learn. However I decided to go for the same lesson for all of them after discussion with Robert Sussuma. The lesson was simple and punctuated with the trials of the vocal task, mainly to help the singers notice what was changing/sensing any differences. I was pleasantly surprised that **the same lesson helped all the singers and their nervous systems learnt what was needed for them at that point**. In fact, I don't think I could ever have known what was happening inside of their bodies just by observing them through the laptop screen in an online lesson. **The somatic lesson seemed to be 'the teacher'** in a way and once the singers had experienced things for themselves, **their vocabulary changed** from 'I tried to do this/that' to 'I know what is happening/how much air is left/all my torso is free and involved'. Once they 'knew' it was easier for them to go into the trials.

After the second retention test, participant 5 reported that 'practicing' was now a pleasure for him and it didn't feel effortful anymore. Participant 2 reported having practiced 2-3 times during the week for 10 – 15 minutes. On the day of the retention test, when singing 'Abide with me' she noticed that her voice had become bigger and brighter and effort had lessened. Moreover, she had not done any warm-up before the retention test. Participants 1 and 4 observed that they were free to play with emotions and style of the song because they did not need feel the need to control or manipulate anything in order to get the sound they desired , because that was happening automatically during the performance situation.

Email exchange with Robert Sussuma

Somatic learning Inbox x



Anupa Paul <ap.voxbox@gmail.com>

to Robert ▾

Mon, 21 Dec 2020, 18:42



Hi Robert,

Thank you for your wonderful insights on learning in singers. In relation to our conversation over Zoom, I've written out a draft of the lesson to be used for the purpose of my research study. Thank you for suggesting it. Please have a read through and suggest any changes as necessary.

As I'm looking to interweave somatic and motor learning into a singing lesson, here is a sample lesson to do with breathing.

1. Open Sensory: Begin by asking the singer to sense where their diaphragm is, it's size and location in the torso.
2. Tactile: Ask the singer to feel the lower outline of their ribs - front and back. Explain how diaphragm is attached to the ribs.
3. Finding new options: Think of the lungs as balloons and imagine filling the right and left balloon with air.
4. Arm variations: Singer explores breathing/ filling of balloons by keeping a) arms crossed, b) lifting arms up - first right arm, then left arm, then both arms and shifting weight on the pelvis. C) both arms up and looking at the ceiling.
5. Add a sound - sssss/zzzzz.

Each of the above steps will be alternated with trials of the reference, which is counting on a single exhale.

Regards

Anupa



Robert Sussuma

to me ▾

Mon, 21 Dec 2020, 18:45



That's it!

You might want to add, sensing the ribs and sternum in general as well, to the diaphragm part in the beginning.

Otherwise, looks good!

R

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Robert C. Sussuma *(he/him; they/them)*

BM, MMus., Guild Certified Feldenkrais® Practitioner

Transformational Learning Facilitator and Voice and Movement Educator

New website coming soon: www.thesingingself.com

Pre-study questionnaire coding

In Vivo	Descriptive	Categories
method	Easy	Improving efficiency
easy	Many ways	
ease and precision	Increased efficiency	
different ways of sound production	Increased ability	options
effectively and correctly	Capacity to reach best potential	
tactic	Proper use of instrument	Process
using the instrument the right way	learning should be interesting	
make it more easy	awareness improves singing	Improper technique shows up in singing
should feel good	liberating	
shouldn't be strained	understanding singing	
very useful	improving efficiency	
able to understand	applicable	Intention to improve
knowledge	making singing proper	
grow into finer singer	ability to control ones singing	
teach the vocal muscles	changing muscle memory	Sensations of singing with good technique
teach the whole body	work to be put in	
to improve	unmanageable	
practical applications	evident	Importance of understanding a concept
adapting	can be trained	
correcting	intentional	
practicing	challenging	
exercise		
practicing daily		
attending trainings		
listening		
satisfying		
tend to lose breath often		
difficult		
very huge concern		

strained unpleasant sound not able to complete a phrase awkward to break words disappointing experiences breathing exercises purposeful breathing take enough breath singing vowels		
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Lessons Coding

In Vivo	Descriptive	Categories
I knew I was confident enough to try new things It was very comforting My body was moving automatically It was eye opening Felt I was using my body to sing Embodied mind Feel more relaxed When inhaling I felt everything expanding Confusing now but things will get better It feels like one unit I exert too much I could feel the difference Automatic and unconscious	Focused and aware Easy and automatic Many benefits from one skill Messy learning	

Builds your confidence That's a new learning That's what I felt Has become more stable I think too much air is going out If it is easy for me, then I have mastered the skill Not hit or miss Becomes more reliable If you sing the right way, it should feel good. More controlled now Is it the awareness that caused the change? It's a lot different now. I was comfortable to sing slower Recalling the sensations I could really feel the difference after the exercise. No stress now Its more comfortable		
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Post lesson questionnaire coding

In Vivo	Descriptive	Categories
I have learned I feel that I am not exerting Complete focus on the movements of my body By Second lesson..well aware of how to breathe	Aware of a new habit Singing better Easy and unstressed Appealing way of learning Understanding the process is vital	Autonomous learning increases retention

efficiently Improves the quality of my singing Helped me to sing easily Feel there has been a drastic change in my singing I learned New learning I understood the importance Wrong understanding I could feel...significantly improved Awareness Understanding More comfortable towards the end of a long note Pauses while singing have come down I could feel the transition from shaky notes to effortless, steady notes Having mind and body connection Got an awareness of how my body works Felt voice has become louder and bold Singing became effortless	No more anxiety while singing Intentional singing New awareness of body use while singing Learning evident in singing Change of understanding Mind and body involved in singing	
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Reflective journal and analytical memos coding

In Vivo	Descriptive	Categories
Explore movement options which cannot be described using words Allow them to use their attention Given a choice of a better way of doing things Noticed only when someone pointed things out When the singer 'knows' Lesson was messy but packed with learning He 'realized' He sensed the difference Limited idea of what to pay attention to Needed to be guided Subjective attention Noticed changes during the week Mind body connection Second lesson solidified the first lesson I could withdraw my feedback Have a hard time getting out of their own way Work with their nervous system rather than their conscious self Same lesson helped all the singers Nervous system learnt what was needed Somatic lesson seemed to	Power of choices Working in collaboration with the student Respecting the students perspective Awareness changes patterns	Learning – a collaboration

be 'the teacher' Vocabulary changed		
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