

BMPF7003 APPLICATION OF LEARNING IN THE WORKPLACE MODULE 1:

LLOYD WYLDE 2133961

29.11.24

What strategies and further research might be undertaken to understand breath holding in the voice studio?

Word count:

Part 1: 2938

Part 2: 1829

Total: 4766

TABLE OF CONTENTS

	Page
Essay Part 1	3
Critical Reflection: Essay Part 2	11
References	16
Appendices index	24
1. Personal Development Plan	25
2. Training and current employment	27

What strategies and further research might be undertaken to understand breath holding in the voice studio?

Introduction

Open your mouth, breathe in, hold it, what do you feel? Wait, now speak. Having witnessed in the voice studio, an audible inhalation, a holding of the breath and then onset of speech, I was curious as to the cause. Is there a right way to breathe? Hoit and Hixon (1991), state that people may use a myriad of different breathing patterns to get them through their day and if they're alive, then those patterns are working for them (cited Harris et al., 2002, p.159). However, the point for the professional voice user (PVU) is that small changes in breath function can have significant effects. PVU's need efficient flow phonation, as Titze states, this describes efficient airflow as the vocal folds vibrate (Titze, 2015, p.1). Let me clarify the *specific* breath to which I am referring as being 'held', as there is not just one of breath (Shewell, 2009; Morris and Hutchison, 2017). Breath for life, commonly referred to as tidal breathing, with passive exhalation. The term passive is used, as no energy is required to push air out of the lungs. Thus, active exhalation, qualified as, the breath we use for everyday speech and heightened speech/singing, or, as McCallion puts it "breathing for work" (McCallion, 2013, p.40) is the breath to which I refer. The movement of the thoracic cavity in breath is uniquely linked to the larynx, as they are a 'functional unit' (Rubin, Sataloff and Korovin, 2014, p.638) and thus, any irregularities in either domain, negatively impact function and regulation. Maximum Phonation Time (MPT) the length of time an individual can maintain speech or song, before needing to take a breath, is the result of the laryngeal and respiratory functions working efficiently together (Chukwu *et al.*, 2022). This essay is an enquiry into what I perceive to be inefficiency in breath holding (BH) and, to seek potential causations, examine current methodologies and strategies for use in the studio, to lessen the impact of this 'elusive' (Gilman, 2015) obstacle. Why is it elusive? Because 'sometimes problems are more elusive as often there is no visible pathology or behavioural cause' (Gilman, 2015, p.29).

Literature Review

An initial review of the literature into BH seemed to bifurcate into exogenous and idiopathic illnesses and, breath as an aspect of psychological regulation or interruption of homeostasis.

A few examples of the range of topics were deliberate BH as part of radiation treatment, the break point for breath before unconsciousness, BH spells in children (Parkes, 2006; Lens *et al.*, 2016; Kaya Ozcora, 2022). Then a realm of breath research with its' focus on anxiety and (ANS),(Nardi *et al.*, 2003; Berenz *et al.*, 2012; Zope and Zope, 2013; Zaccaro *et al.*, 2018). My initial point of reference was Gilman's (2015) article which referenced BH in her vocal students. She acknowledges that the evaluation and development of strategies for irregular breath behaviour, is challenging because it can be influenced by multiple factors, but the first factor to be addressed is alignment. Hoit, following on from Wade and Gibson's (1951) discovery that change of posture affected lung volumes, investigated body posture and its' influence on breath (1995). She critiqued attempts to transfer supine relaxed tidal breathing into standing speech breathing in a clinical setting suggesting it is not possible to achieve. She calls for an understanding of how body posture influences breath to be brought into clinical settings (Hoit, 1995). In the *Voice Clinic Handbook* (Harris *et al.*, 2002) order that which they deem to affects breath thus: obstructive airway diseases, posture, lastly, what they term, the emotional 'tendencies of the patient' (Harris *et al.*, 2002, p.160) and adrenalin inducing anxiety which increases the rate of respiration. Interestingly, when advising how dysfunctional breath patterns may be improved, the three areas they cite for the patient to engage in are: watching, listening and feeling (kinaesthetic feedback). However, they do not address the emotional aspect, perhaps because that, in and of itself, is too large a topic. In their article on nasal and oral inspiration during speech breathing (Lester and Hoit, 2014) cite research that breathing through the mouth may 'place voice users at risk for exacerbating vocal attrition' (Sivasankar and Fisher, 2003, p.1416). Thus, the consistent opened mouth, oral inhalation, could exacerbate vocal problems. When exhalation is passive, the diaphragm stops contracting and slowly returns to its resting position, in active exhalation we are consciously controlling the length of the outbreath which is required for McCallion's 'breathing for work' (2013). When we hold our breath, that power is compromised, the vocal folds close, causing a build-up of subglottic pressure, the longer the breath is held, the stronger the subglottic pressure, which can produce a hard glottal onset (Seesholtz, 2022) This may result in audible release of air at the beginning or end of phrases, vocal fry and hard glottal onsets, as well as feelings of constriction (Gilman, 2015; Seesholtz, 2022).

Possible Causes

I would posit several causalities for breath being held:

- Obstructive pulmonary disorders (Harris *et al.*, 2002)
- Injury or musculoskeletal analogies that compromise breath efficiency (Perri and Halford, 2004)
- excess of muscular tension (Engquist, Ørbaek and Jakobsson, 2004; Kooijman *et al.*, 2005)
- Anxiety/Performance anxiety (Merritt, Richards and Davis, 2001; Guyon *et al.*, 2020)
- Stress and/or psychological drivers (Fincham *et al.*, 123AD; Perciavalle *et al.*, 2017)
- Technology (Peper and Harvey, 2024)

Technology

Journalist, Linda Stone (2012) coined the term email apnea, to describe the shallow breathing that went with looking at her phone. We receive a dopamine hit when we look at our phone/screen and studies on dopamine and breath found dopamine hits to have a negative effect on breath in animals. (Nishino and Lahiri, 1981; Sugita *et al.*, 2015) Research by Mark, Volda and Cardello (2012) observed office workers, during 5 working days without access to email, the control group continued to have access. The results showed that workers with access to email had higher stress rates. There is a growing area of research looking at the physical ramifications of our use of hand-held mobile devices (Fiebert *et al.*, 2021; Dhale *et al.*, 2024) as well as research into how it may affect our heart rate variability (HRV) (Ahamed, Karthick and Joseph, 2008; Ekici, 2016). Both our musculoskeletal state and our HRV feed into homeostasis. Steffen *et al.*'s (2021) research into breathing techniques and HRV, showed improved regulation of physiological functioning when breath was regulated. Peper and Harvey(2024) note the physical implications of 'slouching' (2024, p.9) when looking at technology and how this can encourage shallow breathing which can heighten anxiety. Though beyond the scope of this essay, further study is required looking at the relationship between technology and how it may be subtly shifting our breathing patterns.

Stress and psychological drivers

Given the breadth of this topic and the brevity of this essay, to fully address how stress, anxiety, performance anxiety and other psychological drivers as they occur in the specific

population in the voice studio is not possible. However, suffice to say that Rubin et al note that when discussing the voice and causes of

dysphonia, personality traits and emotional issues also need to be taken into consideration. There are postural variations that may relate to self-image and psychosocial issues.

(Rubin, Sataloff and Korovin, 2013, p.632)

Obviously, stress and anxiety exist within the general population. However, Dietrich et al's (2008) research looked at patients in the voice clinic who presented with paradoxical vocal fold movement disorder (PVFMD), muscle tension dysphonia (MTD) as well as stress, anxiety and depression. They acknowledge stress in the general population but add that current literature would suggest that it could also be causal in some subpopulations of the voice clinic. They note these emotions were 'part of the clinical profile for subset of patients with PVFMD, MTD and vocal fold lesions.' (Dietrich et al., 2008, p.473). Niering et al (2023) suggest the occurrence amongst professional sports people and performing artists of anxiety disorders to be between 19.5% and 34% (2023, p.1). Therefore, we could infer that the physiological manifestations of these drivers may be more influential on (PVU), if those drivers cause MTD which impact voice quality. Stress and anxiety represent a particular problem for the performer as Sataloff (1988) notes. They may experience physiologic manifestations of their emotions, that interfere with the delicate mechanism of breath, though he and Rubin(2013) seem to have an implicit understanding of the unique nature and traction within the actor of this interplay. There is growing research devoted to performance anxiety amongst performers, this a logical next step in research for the writer.

Muscular Tension

I am not referring to MTD a specific medical term to describe a set of symptoms seen in the voice clinic which Craig et al (2015) state involves 'excessive muscular recruitment in the larynx and pharynx with concomitant disruption of efficient vibratory parameters' (Craig et al., 2015, p.2). I am referring to muscular tension brought about by postural inefficiencies that can impact respiration. Bunch Dayme (2006) foregrounds the importance of correcting postural inefficiencies to minimise problems. She adds that, for efficient respiration, the body must be in balance, meaning lungs, larynx and pharynx 'are aligned and in the optimal position for efficient breathing' (Bunch Dayme, 2006, p.32).

If the knees are in the locked position, this can tip the pelvis forward, propelling the torso and head forward, inhibiting efficient breathing and voicing, potentially causing compensatory tightening of the laryngeal muscles (Cardoso *et al.*, 2021). Collapsing into the waist, potential tightening of the abdominal area, with a consequential rounding of the shoulders does the same (Case, 2013 p.13; McCallion, 2013, p.10). Case recommends the student voice with collapsed and efficient alignment to feel and hear the difference (2013, p.17). The relaxation of the diaphragm and surrounding abdominal muscles for its reflex return to position, will be inhibited if the abdominal wall is held tightly. As Cuthbertson-Lane (2009) notes 'tension held anywhere in the body has a knock-on effect through the body and will ultimately affect the breath and the voice in terms of quality, health and power'(Cuthbertson Lane in Boston and Cook, 2009, p.73).

As Gilman (2015) observes 'providing lessons that promote somatic awareness and change is key' (Gilman, 2015, p.38) to reversing maladaptation. BH embraces a multilayered, multi-faceted composite of physical and psychological manifestations, that could be said to sit under this umbrella term. The postural markers may be relatively clear, the psychological markers less so.

Current Strategies

Currently with students to combat muscular tension and 'calm' the breath I use mindfulness techniques drawn from Kabat-Zinn (Kabat-Zinn, 2013). Students sit, eyes closed and carry out a body scan, noticing where tensions exist, bringing their awareness to their breath and what it is doing. After working through the muscles of the body tensing and releasing, the exercise finishes with rounds of breathing in for four and slowly breathing out on a count of 6 or 8 to calm the (ANS), first with breath, then unvoiced consonants. The other breath strategy, is the beach ball breath (Case, 2013, p.104). A lengthening of the breath as the hands move away from the body. I believe this allows a calming of the ANS and the opportunity for the student to connect to their breath and body (Zou *et al.*, 2018; Mendo *et al.*, 2022). This is then used with a combination of unvoiced consonants similarly to the Accent Method (Thyme Frøkjær and Frøkjær-Jensen, 2001).

I have previously used semi-supine breath work coming into standing. However, after reading Hoit's (1995), I now understand this to be inefficient and impossible, as in she

concluded the 'problem of attempting to carry over learning from a non-speech breathing activity to a speech breathing activity' (Hoit, 1995, p.356).

Potential Methodologies

Surveying practitioner literature including: Linklater (1976), Houseman(2002), McCallion(2013), Bunch-Dayme (2006), Berry(1973), Carey & Carey (2010) and Rodenburg (1997), as well as Alexander (2013) and Feldenkrais Technique (1972). I attempted to locate what methodologies might be useful for mitigating BH and to see if any of those practitioners raised it as an issue in their texts. None of these texts specifically address BH, they address efficiency and imaginatively connecting thought to breath. The Careys state 'the breathing impulse is the primary impulse; if you're blocking it, what chance do other impulses have?' (Carey and Carey, 2010, p.45). Shewell (2009) notes that active, conscious control of the breath can only go so far. Linklater does not address BH itself, only speaks to the limit of the voice to express the imagination, if it is straight jacketed by tension (1976). I question why none of these practitioners apart from Gilman (2015) and Seesholtz (2022) address this issue and its wider implications, it seems remiss to do so.

Feldenkrais seems to offer interesting holistic possibilities for working on the musculoskeletal relationship to breath but warrants a much deeper dive than I can provide here. Thus, I have chosen to focus on the two potential methodologies that seemed to offer most promise and opportunity for concrete lines of enquiry in the studio. They specifically address the triumvirate of body, breath, posture, which from my professional experience, I would assert is paramount to mitigate BH. These are the Alexander Technique (AT) and the Accent Method (AM) which have studies into their efficacy (Valentine *et al.*, 1995; Davies, 2020; Othman, Baraka and Rifaie, 2021; Abdelgoad and Alrusayyis, 2022a).

AT is a useful platform to explore voice work, as it requires you to inhibit physical habits and be aware of what Gelb (2013) describes as, 'changing unnecessary tension patterns within the body that interfere with it' (2013, p.130). Given that Alexander normally requires an in-person trainer, one aspect of it, that is immediately available and applicable is the *Whispered Ah* (McCallion, 2013; Capalbo, 2024). In standing position, with an aligned body, thinking of a smile, the jaw is released, the teeth gently opened, a whispered 'ah' sound made on the outbreath. Performed with the impulse to think of something pleasurable, with a smile, a sense of ease hopefully releasing physical tension consequently. Seesholtz's (2022)

process of habilitation includes self-awareness exercises, thus repeated practice with connecting to release, allows a kinaesthetic anchor point as to how their state may be shifting as they work with it over time. As McCallion (2013) notes it enables the student's inspiration and expiration to be performed properly, using the musculature in the right way thus preventing BH inefficiency. While Gilman (2015), Seesholtz (2022) and McCallister Viel (2018) discuss the resetting, or rewiring of the somatic map, to bring the student's awareness to what their body and breath are doing. Without this awareness of the body's reactions, I believe further breath work would be compromised.

AM works to create flexibility and strength in the abdominal muscles as well as efficiently coordinating breath, and phonation (Bassiouny, 1998; Morris and Hutchison, 2017). It can be reproduced in standing and sitting. I chose this because it optimises vocal function by training 'normal' patterns of breathing through a systematic routine involving unvoiced consonants. Originally designed as a voice rehabilitation programme, originated by Smith and further developed by Thyme Frokjaer, it works specifically on the breath to rehabilitate damaged voices, using unvoiced consonants, built up over time to be practised in increasingly lengthy rhythmic patterns, with supported stretches and positions. I believe it is necessary to engage in activities that reset the body, such as Alexander, and then actively train the professional voice user's breath to respond to the demands of their job. Breath powers speech, so the active training of AM, with its use of sitting and standing, connecting to breath, but then into voicing, with gradually more intricate rhythmic patterns, seems to offer an ethically, well researched model to use (Abdelgoad and Alrusayyis, 2022b). Morris and Hutchison's (2017) research with opera students showed the group who had received AM, versus the control, displayed increased pitch range and 'significant improvements in the dynamic ranges and airflow tracing morphology that could be attributed to the Accent Method' (Morris and Hutchison, 2017, p.111).

Conclusion

Perhaps it is the prerogative of students at the beginning of their study to ask seemingly simple questions, that ultimately belie the depth and complexity of the possible answer. Perhaps unsurprisingly, it became clear to me how wide ranging and far reaching the issue of BH can be. Anyone can hold their breath, but for the PVU the issue is particularly relevant, any negative impact on the voice could lead to disorder and thus loss of work. Postural inefficiencies, muscular imbalances, psychological stresses, unhelpful relationships to

technology, can all potentially cause breath holding (Dietrich *et al.*, 2008; Guyon *et al.*, 2020; Fiebert *et al.*, 2021; Dhale *et al.*, 2024). It is a complex issue, intersecting physiology and psychology, each student must be assessed individually to ascertain their specific driver(s). The individual, as well as their relationship with their teacher will dictate whether one methodology or a multidisciplinary approach is found to be more beneficial. McCallister-Viel's work which highlights the 'Western biomechanical model' (2008, p.128) of voice training was a major revelation. She cites Boston's introduction to Turner's *Voice and Speech in the Theatre*(2007), tracing major teaching in voice work back to the voice scientist Aiken and the 'twinning of science and practice in modern voice work' (Boston, cited McCallister-Viel, 2012, p.152). This has directed me to further study this Cartesian dualistic split in voice work. What I saw that prompted the question, is the tip of a very large and complicated iceberg, but in a small way the research for this essay has begun to assist the slow process of digging for an answer.

Critical Reflection

As Cottrell acknowledges 'there is a great deal of challenge in working with the raw materials of our experience'(Cottrell, 2023, p.203). Bloom's taxonomy of learning (Bloom and Krathwohl, 1956) has three learning domains: cognitive, affective and psychomotor. When later developed by Anderson and Krathwohl(2001) metacognition was added to the revised taxonomy. My own metacognition (Flavell, 1979) has been hampered by what I felt to be a lack of framework and methodologies in my practice, hence my decision to embark on further study.

Critical reflection in an academic sense is a new landscape for me, although unknowingly, I have been using Schön's *reflection-in-action* and *reflection-on action* model (Schön, 1991). On researching models, initially, I was drawn to the DEBRIEF model (Allan, 2009). I liked both its simplicity and, as it is drawn from a healthcare setting, it might align with the social/scientific nature of voice. She acknowledges the debt to Kolb's (Kolb DA, 1984) learning cycle and Pendleton's feedback rules (Pendleton et al., 1984; cited Walsh, 2005) but adds extra stages. I was also drawn to Maclean's weather model (Maclean, 2016), as the lightening and fog stages, highlighting what you did not see and what you failed to understand, felt personally relevant, as I began to feel overwhelmed at the scale and scope needed to potentially answer my question. Though I appreciated both models, there was little research available about their application outside of a clinical or a social care setting. They both included feedback from colleagues, which I felt that, as a lone practitioner, might not be suitable for me

Ultimately, I decided to use Ghaye's (2010) reflective model, because of its' focus on positive transformation in teaching and a strength-based, rather than deficit-based focus. My own inner critic is strong and, I recognise my tendency to regard my teaching as in deficit. I have become an 'accidental academic' (Wright, 2016, p.426) and as such struggle with 'imposter syndrome' (Wilkinson, 2020) and felt that Ghaye's model would be a necessarily positive step in advancing my teaching practice. 'You can understand your practice by looking backwards – but work needs to be lived forwards'(Ghaye, 2010, p.13).

The model contains four questions:

1. Appreciate: ask what is successful and positive right now?

Who I am in the room with students is a sum of the different modalities of my past experience (for training see Appendix 2) as an actor (5 years), drama practitioner (25 years) and employee in different business industries (30 years); there is a breadth of differing experiences to draw on. A Masters in Fine Art (2014-16) in Voice Studies at the Royal Central School of Speech and Drama, gave me a pedagogic framework and understanding to some of my experiential learning. I have continued to attend voice workshops and conferences since then. Being able to call on different practitioner's work: Berry (1973), George (George, 2005), Estill (2010), Houseman (2002), Linklater (1976), Rodenburg (1997) allows me a toolbox of useful resources for student choice. If a particular methodology with a student doesn't work, I have others to draw on. Over ten years of voice teaching, I have grown a wider circle of practitioner colleagues to discuss different methodologies and experiences. I reinforce in class, that there is no right way to experience an exercise, that the student must give themselves permission to play and discover. I encourage the students' awareness of their body, their breath and encourage acceptance and recognition of the place they are in their learning, which is informed by Acceptance Commitment Theory (ACT)(Juncos *et al.*, 2017).

2. Imagine: what do we need to keep doing and stop doing to make this better in the future?

I will continue to keep a reflective journal, to map and plot the progression of my shifts in the transformation of my learning (Mezirow, 1981). To enhance my understanding of and the students' proto (learning) and deuterio-learning (learning about context) (Bateson cited Visser 2003) within the contexts of our place of learning (see Appendix 1). This feeds into Argyris and Schön's (1974) 'theory-of-action' and the concept of double-loop learning. In single loop learning we ask, what are we doing right and make corrections to the errors. In double-loop learning we correct/change the causes behind our errors. I will further research how Bateson's 'levels of learning' (Tosey, 2006), as then developed by Argyris and Schön, is needed, so that I can translate learnings from this organisational methodology, into the voice studio, where it can be 'embedded, contextual, relational learning into intentional change through inquiry' (Tosey, 2006, p.10).

I will continue to question *what* I'm teaching, *why*, ensuring a requisite mix of theory, practice, in differing learning styles, with opportunities for student reflection. Ensuring my own understanding of the pedagogic and methodological underpinning of the topic.

My encounter with McCallister-Viel's book (2018) work highlighting the 'Western biomechanical model' (2008, p.128) of voice training, has been revelatory. She cites Boston's introduction to Turner's *Voice and Speech in the Theatre*, tracing major teaching in voice work back to the voice scientist Aiken and the 'twinning of science and practice in modern voice work' (Boston and Turner, 2007; cited McAllister-Viel, 2018, p.152). This has directed me to further study the Cartesian dualism in voice work, as I realise, I cannot continue to teach in this dualistic way anymore, it seems too binary and not reflective enough of the fully somatic experience. Further reading of Gilman (2014) shows the possibility for working in a holistic way resetting the somatic map, so that:

teachers and therapists who work with voice can be brought to a level that they are able to ask the question? What is going on somatically with this person? How can I guide my student to become more self-aware?
(Gilman, 2014, p.xii)

Whilst consulting Chapman's, *Holistic Approach to Classical Voice* (2017) I came across McCarthy's chapter on *Teachers As Learners* who cites Mezirow's 'disorientating dilemma' (McCarthy in Chapman, 2017, p224). This describes the process whereby perspectives and transformations may powerfully occur for the learner, as a result, of a specific external experience. I am suitably disorientated, because I am now, fundamentally questioning how I teach voice outside of my previous dualistic approach and potentially shifting into a more somatically underpinned way of working with students. Continued study is needed to clarify how in the studio to move forward from this mind-body framework. As Philip Zarrilli (Garner, 2020) did, searching 'for a non-dualistic concept of *bodymind* that could reorient the actor's understanding of embodiment and theatrical action.' (Zarrilli cited Garner, 2020, p.354). I am excited to further read Zarrilli's and McCallister-Viel's works to understand how they navigated this, as well as other practitioners outside the received Western canon of breathwork. Further research in Feldenkrais (1972) and Bonnie Bainbridge Cohen's *Body-Mind Centreing* (2011) to find practical ways to meet this apparent bifurcation may also be timely.

The reflection on my dualistic way of teaching voice has caused me to recognise my internal biases, influenced by my education and vocational training over 30 years ago. Then, my institutional experience was one of rigidity with a master/servant dynamic that encouraged submitting to pedagogies unquestioningly. The experience of studying now, feels wholly different, more dynamic but also, potentially, more demanding in terms of tenets and ideas I may have to let go.

What do I need to stop doing? Embrace Ghaye's strength-based aspect of this model, to ameliorate the overly critical inner voice that induces a fight/flight response in me. Having read Hoit (1995), I will stop trying to recreate a relaxed supine tidal breath in standing, as I now understand, that this is anatomically impossible. The work I continue to do in the studio needs to be in physical positions that the students will be in when working; Alexander work can be done in seated and standing.

3. Design: how do we do this?

As I researched this question, I found much literature about dysfunctional breath as result of medical conditions. Much of this was, by its nature, dense and scientific and beyond the realms of my anatomical knowledge so far. Navigating this will involve further study of the muscles of voice production and related muscles, using interactive technology, apps, the Voice Study Centre library and YouTube, as well learning how to study the graphs that are part of many journals articles I have consulted. This seems actionable and manageable at present but of course the research will continue crossing a confluence of several elements: somatic, anatomical, psychological, biomechanical.

4. Act: who takes action and with what consequences and impact?

Ghaye's model includes a fifth question, taking action based on your plan, who will be involved and what impact will it have? Because the model was originated around teams, and I am a lone practitioner, I have chosen to excise this last question, as the consequences of further action will be addressed here. There is further pedagogic research needed to understand my role as learner-researcher currently teaching learner-practitioners. How can my enhanced pedagogic knowledge ultimately enable my students to be the practitioners they wish to be and, existing within a relationship of mutual exchange within the voice studio?

My intention to undertake further study to become a better teacher, must be recognised as being long-term, with practice shifting and changing and requiring continual reflection to ensure that progress is not 'end-gained' as FA Alexander himself explained (Rootberg, 2011). If I choose to embark on a particular breathwork with students, I will need a clear rationale as to the choice made, as well as ethical consideration, given the interplay between

breath and emotional dynamics. The action is mine to take, and as to the consequences, I can only hope that they will deepen, expand and nourish my practice and the student experience.

Conclusion and Action Plan

I am conceptually moving from single-loop into double-loop learning and it is opening my preconceptions about what it means to teach voice. A major reflection has been that if I, as the teacher, am asking students to regulate their breathing, when they may be in heightened physical or anxious states, I need to ensure my regulation in the room. This seemingly simple observation has potentially huge ramifications in terms of which new regulatory system I may use, as well as my current yoga and meditation, and how it may enrich my practice. I have two concrete further areas of study, personal regulation in the room and practitioners' experience away from the dualistic methodology in voice. Though I was not ultimately able to answer my question fully, it has given me much to think about, research and try. Sometimes, it feels lonely and exhausting being a voice teacher, you are by your nature 'on' all the time, you are on your own in a classroom with up to 15 students, energetically it can be draining. The opening up of new horizons of research for me as a voice teacher is very exciting, as it feels like the beginning of what could be a very nourishing process.

REFERENCES

- Abdelgoad, A. and Alrusayyis, D. (2022a) 'Efficacy of the Accent Method of Voice Therapy in Professional Voice Users with Minimal Associated Pathological Lesions of the Vocal Folds', *Indian Journal of Otolaryngology and Head & Neck Surgery*, 74(S3), pp. 5151–5159. Available at: <https://doi.org/10.1007/s12070-021-03035-4>.
- Abdelgoad, A. and Alrusayyis, D. (2022b) 'Efficacy of the Accent Method of Voice Therapy in Professional Voice Users with Minimal Associated Pathological Lesions of the Vocal Folds', *Indian Journal of Otolaryngology and Head & Neck Surgery*, 74(S3), pp. 5151–5159. Available at: <https://doi.org/10.1007/s12070-021-03035-4>.
- Ahamed, V.I.T., Karthick, N.G. and Joseph, P.K. (2008) 'Effect of mobile phone radiation on heart rate variability', *Computers in Biology and Medicine*, 38(6), pp. 709–712. Available at: <https://doi.org/10.1016/j.compbimed.2008.03.004>.
- Allan, H. (no date) *DEBRIEF: A reflective tool for workplace learning*. Available at: <https://educatingtrainers.blogspot.com/2011/01/debrief-reflective-tool-for-workplace.html> (Accessed: 26 November 2024).
- Anderson, L.W. and Krathwohl, D.R. (eds) (2001) *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longman.
- Argyris, C. and Schön, D. (1974) *Theory in practice: Increasing professional effectiveness*. San Francisco, CA: Jossey Bass.
- Bassiouny, S. (1998) 'Efficacy of the Accent Method of Voice Therapy', *Folia Phoniatrica et Logopaedica*, 50(3), pp. 146–164. Available at: <https://doi.org/10.1159/000021458>.
- Berenz, E.C. et al. (2012) 'Anxiety sensitivity and breath-holding duration in relation to PTSD symptom severity among trauma exposed adults', *Journal of Anxiety Disorders*, 26(1), pp. 134–139. Available at: <https://doi.org/10.1016/j.janxdis.2011.10.004>.
- Berry, C. (1973) *Voice and the Actor*. 1989th edn. London: Harrap.
- Bloom, B.S. and Krathwohl, D.R. (1956) *Taxonomy of educational objectives: the classification of educational goals by a committee of college and university examiners Handbook 1: Cognitive Domain*. New York: Longmans.
- Boston, J. and Turner, J.C. (2007) *Voice and Speech in the Theatre*. Routledge. Available at: <https://doi.org/10.4324/9781315059730>.
- Bunch Dayme, M. (2006) *The Performer's Voice: Realizing Your Vocal Potential*. New York: Norton.
- Capalbo, M. (2024) 'Whispered Vowels for Singers', *The Alexander Journal*, (29), pp. 48–58. Available at: <https://doi.org/10.15763/issn.2998-3509.2024.29.48-58>.
- Cardoso, R. et al. (2021) 'Associations between Teachers' Posture, Muscle Tension and Voice Complaints', *Journal of Voice*, 35(6), pp. 933.e23–933.e31. Available at: <https://doi.org/10.1016/j.jvoice.2020.02.011>.
- Carey, D. and Carey, R.C. (2010) *The Verbal Arts Workbook: A Practical Course for Speaking Text*. A&C Black.
- Case, S. (2013) *The Integrated Voice*. London: Nick Hern.
- Chapman, J.L. (2017) *Singing and teaching singing: a holistic approach to classical voice*. 3rd edn. San Diego, CA: Plural Publishing.

Chukwu, S.C. et al. (2022) 'Effects of Diaphragmatic Breathing Exercise on Respiratory Functions and Vocal Sustenance in Apparently Healthy Vocalists', *Journal of Voice* [Preprint]. Available at: <https://doi.org/10.1016/j.jvoice.2022.09.025>.

Cohen, B.B. (2011) *Exploring body-mind centering: an anthology of experience and method*. North Atlantic Books.

Cottrell, S. (2023) *Critical thinking skills : effective analysis, argument and reflection*. 4th edn.

Craig, J. et al. (2015) 'Combining voice therapy and physical therapy: A novel approach to treating muscle tension dysphonia', *Journal of Communication Disorders*, 58, pp. 169–178. Available at: <https://doi.org/10.1016/j.jcomdis.2015.05.001>.

Cuthbertson Lane, R. (2009) 'Breath and the Science of Feeling', in J. Boston and R. Cook (eds) *Breath in Action: The Art of Breath in Vocal and Holistic Practice*. 2013th edn. London: Jessica Kingsley Publishers.

Davies, J. (2020) 'Alexander Technique classes improve pain and performance factors in tertiary music students', *Journal of Bodywork and Movement Therapies*, 24(1), pp. 1–7. Available at: <https://doi.org/10.1016/j.jbmt.2019.04.006>.

Dhale, T. et al. (2024) 'A Review on the Risk of Musculoskeletal Disorder in Humans Originating from Excessive Use of Smartphone', in *2024 Second International Conference on Intelligent Cyber Physical Systems and Internet of Things (ICoICI)*. IEEE, pp. 1432–1436. Available at: <https://doi.org/10.1109/ICoICI62503.2024.10696192>.

Dietrich, M. et al. (2008) 'The Frequency of Perceived Stress, Anxiety, and Depression in Patients with Common Pathologies Affecting Voice', *Journal of Voice*, 22(4), pp. 472–488. Available at: <https://doi.org/10.1016/j.jvoice.2006.08.007>.

Ekici, B. (2016) 'The effects of the duration of mobile phone use on heart rate variability parameters in healthy subjects', *The Anatolian Journal of Cardiology* [Preprint]. Available at: <https://doi.org/10.14744/AnatoJCardiol.2016.6717>.

Engquist, K., Ørbaek, P. and Jakobsson, K. (2004) 'Musculoskeletal Pain and Impact on Performance in Orchestra Musicians and Actors', *Medical Problems of Performing Artists*, 19(2), pp. 55–61. Available at: <https://doi.org/10.21091/mppa.2004.2009>.

Feldenkrais, M. (1972) *Awareness through Movement*. Harpur and Rowe.

Fiebert, I. et al. (2021) 'Text neck: An adverse postural phenomenon', *Work*, 69(4), pp. 1261–1270. Available at: <https://doi.org/10.3233/WOR-213547>.

Fincham, G.W. et al. (2023) 'Effect of breathwork on stress and mental health: A meta-analysis of randomised-controlled trials'. Available at: <https://doi.org/10.1038/s41598-022-27247-y>.

Flavell, J.H. (1979) 'Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry.', *American Psychologist*, 34(10), pp. 906–911. Available at: <https://doi.org/10.1037/0003-066X.34.10.906>.

GARNER, S.B. (2020) 'Phenomenology and the Actor's Breath: In Memory of Phillip Zarilli', *Theatre Research International*, 45(3), pp. 354–357. Available at: <https://doi.org/10.1017/S0307883320000395>.

Gelb, M.J. (2013) *Body Learning:: An Introduction to the Alexander Technique*. Aurum.

George, N. (2005) 'My Life with Voice', *Voice and Speech Review*, 4(1), pp. 33–42. Available at: <https://doi.org/10.1080/23268263.2005.10739444>.

Ghaye, T. (2010) *Teaching and Learning through Reflective Practice*. Routledge. Available at: <https://doi.org/10.4324/9780203833322>.

Gilman, M. (2015) 'Breath holding: an elusive obstacle', *Voice and Speech Review*, 9(1), pp. 28–40. Available at: <https://doi.org/10.1080/23268263.2015.1085719>.

Gilman, M.G. (2014) *Body and voice : somatic re-education*. 1st edn. San Diego, CA: Plural Publishing.

Guyon, A.J.A.A. et al. (2020) 'Respiratory Variability, Sighing, Anxiety, and Breathing Symptoms in Low- and High-Anxious Music Students Before and After Performing', *Frontiers in Psychology*, 11. Available at: <https://doi.org/10.3389/fpsyg.2020.00303>.

Harris, T. et al. (2002) *The Voice Clinic Handbook*. 2002nd edn. Whurr Publishers Ltd.

Hoit, J.D. (1995) 'Influence of body position on breathing and its implications for the evaluation and treatment of speech and voice disorders', *Journal of Voice*, 9(4), pp. 341–347. Available at: [https://doi.org/10.1016/S0892-1997\(05\)80196-1](https://doi.org/10.1016/S0892-1997(05)80196-1).

Houseman, B. (2002) *Finding Your Voice*. 2012th edn. London: Nick Hern.

Juncos, D.G. et al. (2017) 'Acceptance and Commitment Therapy for the Treatment of Music Performance Anxiety: A Pilot Study with Student Vocalists', *Frontiers in Psychology*, 8. Available at: <https://doi.org/10.3389/fpsyg.2017.00986>.

Kabat-Zinn (2013) *Full catastrophe living, revised edition: how to cope with stress, pain and illness using mindfulness meditation*. UK: Hachette.

Kaya Ozcora, G.D. (2022) 'Evaluating the brainstem in children with breath-holding spells', *Northern Clinics of Istanbul* [Preprint]. Available at: <https://doi.org/10.14744/nci.2022.82085>.

Kolb DA (1984) *Experiential Learning: Experience as the Source of Learning and Development*. Upper Saddle River, NJ: Prentice Hall.

Kooijman, P.G.C. et al. (2005) 'Muscular Tension and Body Posture in Relation to Voice Handicap and Voice Quality in Teachers with Persistent Voice Complaints', *Folia Phoniatrica et Logopaedica*, 57(3), pp. 134–147. Available at: <https://doi.org/10.1159/000084134>.

Lens, E. et al. (2016) 'MO-FG-BRA-09: Towards an Optimal Breath-Holding Procedure for Radiotherapy: Differences in Organ Motion During Inhalation and Exhalation Breath-Holds', *Medical Physics*, 43(6Part31), pp. 3711–3711. Available at: <https://doi.org/10.1118/1.4957302>.

Lester, R.A. and Hoit, J.D. (2014) 'Nasal and Oral Inspiration During Natural Speech Breathing', *Journal of Speech, Language, and Hearing Research*, 57(3), pp. 734–742. Available at: [https://doi.org/10.1044/1092-4388\(2013\)13-0096](https://doi.org/10.1044/1092-4388(2013)13-0096).

Linklater, K. (1976) *Freeing the Natural Voice*. London: Nick Hern Books Limited.

Maclean, S. (2016) '“A New Model for Social Work Reflection: whatever the Weather”', *Professional Social Work*, pp. 28–29.

Mark, G., Volda, S. and Cardello, A. (2012) "A pace not dictated by electrons", in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. New York, NY, USA: ACM, pp. 555–564. Available at: <https://doi.org/10.1145/2207676.2207754>.

McAllister-Viel, T. (2018) *Training Actors' Voices*. Abingdon, Oxon; New York, NY: Routledge, 2018.: Routledge. Available at: <https://doi.org/10.4324/9781315109718>.

McCallion, M. (2013) *The Voice Book*. Routledge. Available at: <https://doi.org/10.4324/9781315059648>.

Mendo, B. et al. (2022) 'Can Yoga, Qigong, and Tai Chi Breathing Work Support the Psycho-Immune Homeostasis during and after the COVID-19 Pandemic? A Narrative

Review', *Healthcare*, 10(10), p. 1934. Available at: <https://doi.org/10.3390/healthcare10101934>.

Merritt, L., Richards, A. and Davis, P. (2001) 'Performance Anxiety', *Journal of Voice*, 15(2), pp. 257–269. Available at: [https://doi.org/10.1016/S0892-1997\(01\)00026-1](https://doi.org/10.1016/S0892-1997(01)00026-1).

Mezirow, J. (1981) 'A Critical Theory of Adult Learning and Education', *Adult Education*, 32(1), pp. 3–24.

Morris, R. and Hutchison, L. (2017) *If in Doubt, Breathe Out!: Breathing and Support for Singing Based on the Accent Method*. Compton Publishing.

Nardi, A.E. et al. (2003) 'Breath-Holding in Anxiety Disorders', *The Canadian Journal of Psychiatry*, 48(7), pp. 498–499. Available at: <https://doi.org/10.1177/070674370304800718>.

Niering, M. et al. (2023) 'Effects of Psychological Interventions on Performance Anxiety in Performing Artists and Athletes: A Systematic Review with Meta-Analysis', *Behavioral Sciences*, 13(11), p. 910. Available at: <https://doi.org/10.3390/bs13110910>.

Nishino, T. and Lahiri, S. (1981) 'Effects of dopamine on chemoreflexes in breathing', *Journal of Applied Physiology*, 50(4), pp. 892–897. Available at: <https://doi.org/10.1152/jappl.1981.50.4.892>.

Othman, N., Baraka, M. and Rifaie, N. (2021) 'EFFICACY OF THE ACCENT METHOD OF VOICE THERAPY ON ACOUSTIC MEASUREMENTS, IN HYPERFUNCTIONAL DYSPHONIC PATIENTS', *Ain Shams Medical Journal*, 72(2), pp. 365–372. Available at: <https://doi.org/10.21608/asmj.2021.192557>.

Parkes, M.J. (2006) 'Breath-holding and its breakpoint', *Experimental Physiology*, 91(1), pp. 1–15. Available at: <https://doi.org/10.1113/expphysiol.2005.031625>.

Pendleton, D. et al. (1984) *The consultation: an approach to learning and teaching*. Oxford: Oxford University Press.

Peper, E. and Harvey, R. (2024) 'Smartphone Affects Social Communication, Vision, Breathing, and Mental and Physical Health: What To Do!', *Townsend Letter*, 15 September. Available at: https://www.researchgate.net/profile/Erik-Peper/publication/384054908_0_Smartphone_affects_social_communication_vision_breathing_and_mental_and_physical_health_Published/links/66e757000463442fa85150b4/0-Smartphone-affects-social-communication-vision-breathing-and-mental-and-physical-health-Published.pdf (Accessed: 29 November 2024).

Perciavalle, V. et al. (2017) 'The role of deep breathing on stress', *Neurological Sciences*, 38(3), pp. 451–458. Available at: <https://doi.org/10.1007/s10072-016-2790-8>.

Perri, M.A. and Halford, E. (2004) 'Pain and faulty breathing: a pilot study', *Journal of Bodywork and Movement Therapies*, 8(4), pp. 297–306. Available at: [https://doi.org/10.1016/S1360-8592\(03\)00085-8](https://doi.org/10.1016/S1360-8592(03)00085-8).

Rodenburg, P. (1997) *The Actor Speaks*. 2014th edn. London: Methuen Drama.

Rootberg, R. (2011) "“End-gaining” and the “Means-Whereby”: Discovering the best process to achieve goals of vocal training and pedagogy using the Alexander Technique', *Voice and Speech Review*, 7(1), pp. 157–163. Available at: <https://doi.org/10.1080/23268263.2011.10739536>.

Rubin, J.S., Sataloff, R.T. and Korovin, G.S. (2013) *Diagnosis and Treatment of Voice Disorders*. Third. San Diego, CA: Plural Publishing.

Rubin, J.S., Sataloff, R.T. and Korovin, G.S. (eds) (2014) *Diagnosis and Treatment of Voice Disorders*. 4th edn. San Diego, CA: Plural Publishing.

Sataloff, R. (1988) *Vocal Health and Pedagogy*. Singular Publishing Ltd.

Sataloff, R. (1998) *Vocal Health and Pedagogy*. San Diego: Singular Publishing Ltd.

Schön, D. (1991) *The Reflective Practitioner: How Professionals Think in Action*. Aldershot: Avebury.

Seesholtz, J. (2022) 'Hyperadduction: A Pedagogic Approach for the 21st Century Voice Instructor', *Journal of Singing*, 79(1), pp. 13–20. Available at: <https://doi.org/10.53830/BGDZ3610>.

Shewell, C. (2009) *Voice Work : Art and Science in Changing Voices*. 1st edn. Wiley-Blackwell.

Sivasankar, M. and Fisher, K. V. (2003) 'Oral Breathing Challenge in Participants With Vocal Attrition', *Journal of Speech, Language, and Hearing Research*, 46(6), pp. 1416–1427. Available at: [https://doi.org/10.1044/1092-4388\(2003/110\)](https://doi.org/10.1044/1092-4388(2003/110)).

Steffen, P.R. et al. (2021) 'Integrating Breathing Techniques Into Psychotherapy to Improve HRV: Which Approach Is Best?', *Frontiers in Psychology*, 12. Available at: <https://doi.org/10.3389/fpsyg.2021.624254>.

Stone, L. (2012) 'The Connected Life: From Email Apnea to Conscious Computing. Huffington Post, 7.', *Huffington Post* 7.

Sugita, T. et al. (2015) 'Breathing is affected by dopamine D2-like receptors in the basolateral amygdala', *Respiratory Physiology & Neurobiology*, 209, pp. 23–27. Available at: <https://doi.org/10.1016/j.resp.2014.09.020>.

Thyme Frøkjær, K. and Frøkjær-Jensen, B. (2001) *The accent method: A rational voice therapy in theory & practice*. Bicester, UK.

Titze, Ingo.R. (2015) 'On Flow Phonation and Airflow Management', *Journal of Singing*, 72(1), pp. 57–58.

Tosey, P. (2006) *Bateson's Levels of Learning*. Available at: Tosey, P. (2006). Bateson's Levels Of Learning: a Framework For Transformative Learning? <https://openresearch.surrey.ac.uk/esploro/outputs/conferencePresentation/Batesons-Levels-Of-Learning-a-Framework/99516257702346#file-0> (Accessed: 17 November 2024).

Valentine, E.R. et al. (1995) 'The Effect of Lessons in the Alexander Technique on Music Performance in High and Low Stress Situations', *Psychology of Music*, 23(2), pp. 129–141. Available at: <https://doi.org/10.1177/0305735695232002>.

Walsh, K. (2005) 'The rules', *BMJ*, 331(7516), p. 574. Available at: <https://doi.org/10.1136/bmj.331.7516.574>.

Wilkinson, C. (2020) 'Imposter syndrome and the accidental academic: an autoethnographic account', *International Journal for Academic Development*, 25(4), pp. 363–374. Available at: <https://doi.org/10.1080/1360144X.2020.1762087>.

Wright, R.R. (2016) 'Comics, kitsch, and class: an autoethnographic exploration of an accidental academic', *International Journal of Qualitative Studies in Education*, 29(3), pp. 426–444. Available at: <https://doi.org/10.1080/09518398.2015.1078518>.

Zaccaro, A. et al. (2018) 'How Breath-Control Can Change Your Life: A Systematic Review on Psycho-Physiological Correlates of Slow Breathing', *Frontiers in Human Neuroscience*, 12. Available at: <https://doi.org/10.3389/fnhum.2018.00353>.

Zope, S. and Zope, R. (2013) 'Sudarshan kriya yoga: Breathing for health', *International Journal of Yoga*, 6(1), p. 4. Available at: <https://doi.org/10.4103/0973-6131.105935>.

Zou, L. et al. (2018) 'Effects of Mind–Body Exercises (Tai Chi/Yoga) on Heart Rate Variability Parameters and Perceived Stress: A Systematic Review with Meta-Analysis of

Randomized Controlled Trials', *Journal of Clinical Medicine*, 7(11), p. 404. Available at: <https://doi.org/10.3390/jcm7110404>.

APPENDICES

1. Personal Development Plan
2. Education and Training and Current Employment

Personal Development Plan					
Overall Goal	Development opportunity – what do you want to achieve	What will I do to achieve this – what specific actions will you take	Resources and support needed – what resources might you need and who will help you	What success looks like? How will you know when you've achieved success	Target date for completion – what is the date you want to complete this by
Increase my anatomical understanding of the muscles of voice production	To understand the functionally necessary muscles of voice production to be able to discuss in the voice studio with clients	Reviewing videos on the Voice Study Centre Library Download a suitable anatomy app to facilitate study	Resources available through Canvas on VSC library Research free or paid apps which will best suit my learning Potentially source books that are the appropriate level of detail for my teaching needs	When I can confidently speak to my actor/singing students in class of the relevant muscles that might hold tension Potentially doing a lesson on the key muscles and features that are likely to cause problems for the actor singer	To teach a class by the end of spring term specific vocal anatomy and tension lesson
Attain proficiency in a researched breathing method	Experience a different kind of breathwork from voice breathwork	Undertake a Buteyko breath course	Research certified practitioners and certified courses located near me	When I can practice and facilitate a new breathwork in the	By April 2025

				voice studio that is useful for clients	
Understand the dysregulation of the body and emotions, so that I am able to regulate myself in the voice studio for the clients	To understand how energetically because of my own dysregulation physically, I may be altering the chemistry of the voice studio	Read Bonnie Bainbridge Cohen's on Body-Mind Centreing and voice books through SCONUL access Accessing relevant talks through VSC library Also John Kabat-Zinn's work	Video and book resources available through UWTSD and VSC also through my SCONUL access library in London Asking practitioners that I know who work in the somatic realm for key texts or practitioners that they would recommend	When I have concrete practical steps to regulate myself are in place, whether that is a regular yoga practice, mindfulness practice, or potentially dietary changes	I have a lecture in May 2025, a keynote speech and I would like to be able to draw on my research into regulation in this keynote

Appendix 2

Education and Training

University of Wales, Aberystwyth 1989-1992: BA Theatre Studies with an acting module as a part of the degree

London Academy of Music and Dramatic Art 1992-1993: Classical Acting Course

Royal Central School of Music and Dramatic Art 2014-2016: MFA Voice Studies

Experiential voice work:

Linklater voice work main vocal pedagogy in MFA Voice Studies RCSSD 2014-16

Kristin Linklater Course, Orkney Voice Centre, 2015, 2017

Knight Thompson Experiencing Speech 2015

Estill Level 1 & 2, 2015, 2017, 2020. EMT pathway with Anne-Marie Speed 2017-2020

EMT pathway Tom Burke 2022-23

Margaret Pikes, Roy Hart Workshops x2 2022

Nadine George Voice Work Workshops 2023 x 2 2024 x 2, continued study with Nadine George

Attendance at BVA, VCN and AOTOS conferences 2014 to present day

One to one lessons Barbara Houseman

One to one Alexander Technique lessons Natacha Osorio and Penny O'Connor

Current Employment:

Voice and Text teacher on MA Musical Theatre at the Royal Academy of Music from 2017

The City Literary Institute – voice classes and presentation classes 5-10 weeks long from 1.5-3 hours long, from 2015