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Module 1

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How to identify when professional voice users are performing with a heavy vocal load in the musical theatre industry and what strategies may mitigate fatigue during these performances?

Critical Evaluation

Introduction

To the outside eye, singing and professional voice use can often be referred to as natural ability or talent (Watts *et al*., 2003). However, the renowned Doctor of Musical Arts Barbara Doscher made the comparison “the architect who knows nothing about the stress properties of the materials he uses may envision beautiful forms, but his buildings collapse because of his lack of "technical" knowledge.” (Doscher, 2021, p. 61). Which supports the statement that yes, natural talent exists, however to maintain longevity, sustainability and flexibility within the voice, good technique is paramount (Lehmann, 1993).

As a vocal coach working predominantly with musical theatre students on a BA (Hons) degree at drama school and with professional performers working in the industry, I have a clear understanding of the expectations and extremely refined skillset required to not only succeed within this profession but to maintain a healthy and flexible voice (Bourne, Garnier, and Kenny, 2010). It has become apparent that for performers to be viable in the current industry they must demonstrate an incredibly high level of stamina along with combining a range of vocal styles (Zuim, Stewart & Titze, 2021). The reason for my current study is that in my opinion, performers are often unaware of the vocal stamina required to sustain a healthy voice throughout a year long contract in a musical theatre show (Zuim, Stewart & Titze, 2021). The industry is continuously developing and the vocal demands and expectations for performers are constantly growing and are often unrealistic (Edwin, 2009; Green *et al.,* 2014). Similarly to many practical fields, with increased effort comes increased fatigue and this does not differ when discussing the voice. Vocal fatigue can present itself in a number of ways, such as; hoarseness, loss of vocal flexibility, reduced

range of pitch and often professional voice users struggle to identify it (Nanjundeswaran *et al.,* 2015). After analysing my own training at drama school, through discussions with my students and upon examining the literature, there is evidence to say vocal hygiene must be given greater priority throughout training (D'haeseleer *et al.*, 2017; Koziara & Scherer, 2019). Similar to a marathon runner, whose training can be broken down into; understanding their physical capability, enhancing their ability and most importantly maintaining their ability with health being the priority (Mirani, 2022). This is the way performers must think of their own voices, with the viewpoint of being a vocal athlete (Wilson, 2011; Friedlander, 2018).

What is a vocal load?

Vocal loading within Musical Theatre

It is often said that musical theatre is vocally one of the most demanding genres (Edwin, R. 2009; Freeman, Green, & Sargent, 2015; Zuim, Stewart & Titze, 2021). The research to support this statement takes into consideration all of the elements required to maintain and possess a flexible, versatile and sustainable voice. The expectations are, that all performers are expected to master and execute not only one style or genre with ease but multiple (Hall, 2014) . A study taken in 2014 comparing general audition breakdowns for female identifying performers in the musical theatre industry discovered that performers must be prepared to sing all of the following genres; legit, traditional musical theatre, contemporary musical theatre, folk, rap and pop/rock (See Appendix B for a breakdown of each vocal genre) (Green *et al.,* 2014). Not only do they have to stylistically demonstrate each style but each style demands different technical vocal qualities (Edwin, 2003). Although the previous study was taken in 2014, within more contemporary literature (Lundy, 2023; Weiling, 2023), it is clear to see that the vocal expectation of performers is still incredibly high, with the majority of shows requiring performers to undertake what is described as a heavy vocal load, for 8 shows a week.

Vocal load definition

Which leads us on to the subject of 'vocal loading', having used words such as 'challenging' and 'demanding' throughout, how exactly are we measuring what this means, vocally, for a performer? The term vocal loading is often used when describing the perceived phonatory effort, in other words, an individuals perception of the amount of exertion required for phonation (Van Mersbergen, Beckham, & Hunter. 2021) and usually

falls into the categories ‘heavy, moderate or light’ (Hunter *et al,.* 2020). Upon studying the literature there are conflicting views and opinions on an exact definition of the term, in 2020 a comprehensive literature search was undertaken by Hunter *et al* drawing the conclusion to introduce the terms ‘Vocal Demand’ and ‘Vocal Demand Response’ as a way to move past previous confusion. Their proposed definition for vocal demand is “the vocal requirement for a given communication scenario, and it is independent of the vocalist's physiology, production technique, or perception of the scenario” (Hunter *et al,.* 2020, p.515). In 2013 a study was undertaken with the attempt to assess the impact of a heavy vocal load on the voice of a performer with the objective that if performers develop a better understanding of the impact of vocal loading, there will be a higher chance of injury prevention (Phyland *et al*., 2013a). The study was not only to evaluate the perceptions that working professionals have on their own voice and the impact of vocal loading but to also measure the accuracy of the current scales used to assess vocal function. 128 performers were selected to partake, all who were currently performing in professional musical theatre productions in Australia. After deliberation, the SVHI (Singing Voice Handicap Index, see below) was chosen as one of the measurement tools (Cohen *et al.,* 2007), with 49 of the subjects completing this survey.

TABLE 1. SINGING VOICE HANDICAP INDEX

These are statements that many people have used to describe their singing and the effects of their singing on their lives. Circle the response that indicates how frequently you have had the same experience in the last month.

1) It takes a lot of effort to sing.	never	almost never	sometimes	almost always	always
2) My voice cracks and breaks.	never	almost never	sometimes	almost always	always
3) I am frustrated by my singing.	never	almost never	sometimes	almost always	always
4) People ask “What is wrong with your voice?” when I sing.	never	almost never	sometimes	almost always	always
5) My ability to sing varies day to day.	never	almost never	sometimes	almost always	always
6) My voice “gives out” on me while I am singing.	never	almost never	sometimes	almost always	always
7) My singing voice upsets me.	never	almost never	sometimes	almost always	always
8) My singing problems make me not want to sing/perform.	never	almost never	sometimes	almost always	always
9) I am embarrassed by my singing.	never	almost never	sometimes	almost always	always
10) I am unable to use my “high voice.”	never	almost never	sometimes	almost always	always
11) I get nervous before I sing because of my singing problems.	never	almost never	sometimes	almost always	always
12) My speaking voice is not normal.	never	almost never	sometimes	almost always	always
13) My throat is dry when I sing.	never	almost never	sometimes	almost always	always
14) I’ve had to eliminate certain songs from my singing/performances.	never	almost never	sometimes	almost always	always
15) I have no confidence in my singing voice.	never	almost never	sometimes	almost always	always
16) My singing voice is never normal.	never	almost never	sometimes	almost always	always
17) I have trouble making my voice do what I want it to.	never	almost never	sometimes	almost always	always
18) I have to “push it” to produce my voice when singing.	never	almost never	sometimes	almost always	always
19) I have trouble controlling the breathiness in my voice.	never	almost never	sometimes	almost always	always
20) I have trouble controlling the raspiness in my voice.	never	almost never	sometimes	almost always	always
21) I have trouble singing loudly.	never	almost never	sometimes	almost always	always
22) I have difficulty staying on pitch when I sing.	never	almost never	sometimes	almost always	always
23) I feel anxious about my singing.	never	almost never	sometimes	almost always	always
24) My singing sounds forced.	never	almost never	sometimes	almost always	always
25) My speaking voice is hoarse after I sing.	never	almost never	sometimes	almost always	always
26) My voice quality is inconsistent.	never	almost never	sometimes	almost always	always
27) My singing voice makes it difficult for the audience to hear me.	never	almost never	sometimes	almost always	always
28) My singing makes me feel handicapped.	never	almost never	sometimes	almost always	always
29) My singing voice tires easily.	never	almost never	sometimes	almost always	always
30) I feel pain, tickling, or choking when I sing.	never	almost never	sometimes	almost always	always
31) I am unsure of what will come out when I sing.	never	almost never	sometimes	almost always	always
32) I feel something is missing in my life because of my inability to sing.	never	almost never	sometimes	almost always	always
33) I am worried my singing problems will cause me to lose money.	never	almost never	sometimes	almost always	always
34) I feel left out of the music scene because of my voice.	never	almost never	sometimes	almost always	always
35) My singing makes me feel incompetent.	never	almost never	sometimes	almost always	always
36) I have to cancel performances, singing engagements, rehearsals, or practices because of my singing.	never	almost never	sometimes	almost always	always

The remaining 79 subjects answered the interview questions shown below, which were formulated by the researchers.

1a. How does your voice usually feel after singing?
1b. How does your voice usually sound after singing?

2a. How does your voice usually feel after performing?
2b. How does your voice usually sound after performing?

3. What factors (feelings or sound) if any tell you that you have sung long enough?

4. What factors (feelings or sound) if any tell you that you have over-sung?

5. Does your voice commonly vary across a working week and if so, in what way/s?

6. How does your voice respond to a heavy vocal load/vocally demanding days?

7. What factors affect your voice the most?

8. Which days of a performance week do you perceive to be the hardest vocally?

The SVHI results were inconclusive as a number of subjects expressed that the questions weren't relevant due to them not experiencing a voice problem, the subjects who did complete the survey perceived that they were vocally healthy. This feedback would encourage us to evaluate the effectiveness of the SVHI for performers, although it is successful when identifying a major voice disorder, potentially it lacks the detail to identify any minor or developing issues, therefore it may be time for a new scale to be introduced. However, the results from the 79 interview subjects enabled more concise findings, concluding that, two thirds of the subjects indicated it was normal for them to feel regularly vocally tired, experience loss of range or a drop in the pitch of their speaking voice (Phyland *et al*., 2013a). Personally, I think this supports the argument that performers aren't always aware of the impact vocal load has on their voice and often 'fatigue' can be viewed as normal within this industry (Kitch & Oates, 1994). Although the study is extremely beneficial, it would be useful to know the roles that each performer played to analyse the difference of vocal loading between shows. This poses the question, how clear is the term 'Vocal Loading' and do performers understand the true definition?

Vocal Dosing

Another term frequently used when discussing vocal demands is vocal dosing. Similar to vocal loading, vocal dosing can be measured in multiple ways such as; '*distance dose'* measuring the distance accumulated by the vocal fold in vibration, *'time dose'* measuring the time the vocal folds spend vibrating, '*energy dissipation dose'* measuring the dissipated power over time and *'Vocal Loading Index (VDI)'* measuring the number of vibration cycles

of the vocal folds (Titze, Svec & Popolo, 2003). If vocal coaches and professional voice users have the ability to accumulate the level of vocal demand, then it will allow them to preempt the potential effect this has on the voice and implement the prevention of injury (Gaskill, Cowgill & Tinter, 2013; Phyland, 2017). In response to this, Vocal Dosimeters were created (Bottalico *et al.,* 2018). In 1983 the first newly devised speech accumulator was created to measure the time of vibration of the vocal folds using a small contact microphone attached to the neck (Rye *et al.,*1983). Since then the dosimeters have been developed and are now available for commercial use but how effective are these devices at measuring the impact of vocal dose? In 2023 a study was taken to examine vocal load by measuring the vocal doses of 5 female identifying performers playing lead and ensemble roles during the rehearsal process for a university production of NINE by Maury Yeston (Zuim, Stewart, & Titze, 2023). All participants had a KayPENTAX APM 3300 dosimeter sensor attached to their neck and the accelerometer was worn throughout four separate three hour rehearsals in different stages of the process. The study successfully documented the unpredictability of voice production at different stages of a rehearsal process and there was clear evidence of the different demand between roles. As one of the first studies to successfully analyse multiple roles and the varying demands it enabled us to clearly see a difference within the load for each individual, however, research has not yet concluded a safe level of 'vocal dose' therefore a comparison can not yet be made (Zuim, Stewart, & Titze, 2023). It would be useful to undertake another study with participants wearing the dosimeter for a consecutive week of performances to measure the impact of fatigue throughout a week of shows to determine whether the vocal dose increases in line with the perceived phonatory effort of the performer.

How do performers identify the impact of a heavy vocal load?

EASE Scale

As voice practitioners understanding and defining both loading and dosing carries great importance, however it is the performer who needs to understand and be aware of the impact on their own voice (Gaskill & Hetzel 2017). The reality is, a performer will not always be able to use a dosimeter therefore how can performers analyse whether they are using a heavy vocal load? The EASE (evaluation of the ability to sing easily) scale (*see below)* was created by Debra Phyland in 2013, the scale was designed to assess singers

own perceptions of the current state of their voice as a potential way to signify the effects of vocal loading. The scale combines a number of questions using relatable terminology to allow the singers to assess the way their voice is currently responding and can be used as a way to potentially asses those at risk of developing a voice disorder or identify those who may need to take extra precautions (Phyland *et al*, 2013b). The EASE scale has been used in a multitude of previous studies in attempt to asses the effects of vocal loading (Phyland *et al* 2015; Zuim, Stewart & Titze 2021; Vella, Brown & Phyland 2021).

Items	Not at All	Mildly	Moderately	Extremely
Factor 1				
My voice is husky				
My voice is dry/scratchy				
My throat muscles are feeling overworked				
My voice feels good*				
My top notes are breathy				
The onsets of my notes are delayed or breathy				
My voice sounds rich and resonant*				
My voice is ready for performance if required*				
My voice is tired				
My voice is worse than usual				
Factor 2				
My voice cracks and breaks				
My voice is breathy				
I am having difficulty with my breath for long phrases				
My voice is cutting out on some notes				
I am having difficulty changing registers				
Today I am having difficulty with my high notes				
I am having difficulty projecting my voice				
I am having difficulty singing softly				
Singing is hard work				
I am having difficulty sustaining long notes				

In 2018 a survey was undertaken in Brazil with a number of professional musical theatre performers, performers completed the EASE scale immediately after a performance, the data indicated that performers with more experience presented lower scores on the scale, meaning less symptoms (Pacheco & Behlau, 2019). This scale allows performers to be more self aware of their voice and enables them to give their voice more consideration.

Stigma and ethical considerations

However, the only potential issue with the EASE scale is the vulnerability expected of performers to answer honestly. Unfortunately, there is a stigma around vocal injury and trauma within the musical theatre industry and it seems as though this has also slowly filtered into undergraduate training too (Suddeth & Flynn 2022). Meaning, if a performer is noticing any changes within their voice, that being spoken or sung, unfortunately they do not always feel comfortable to discuss this, therefore further damage is often caused (Flynn, 2020). Furthermore, we must give performers the tools to evaluate the state of their voices, especially after undertaking a heavy vocal load yet also create an environment where performers feel comfortable to discuss any issues or changes they may be experiencing. In addition to this, with the tools currently available, musical directors must identify the demands that performers are about to face within each show and ensure they are fully prepared with the necessary precautions to maintain a healthy voice throughout the duration of each contract.

Proposed strategy to mitigate fatigue when performing a score with a heavy vocal load.

Firstly, to allow performers to mitigate fatigue prior to entering a rehearsal process, they need to be aware of what's ahead. For example, prior to running a marathon, runners have examined the route including the distance, the incline and the terrain, alongside this they will have found an average pace in line with their current state of fitness to achieve their desired finish time (Smyth, *et al*., 2022). Suggested approaches to assessing the vocal load prior to a rehearsal process would be; analysing the score in its entirety, highlighting the expected vocal qualities of the performer and the segments that may require a heavier vocal load. Depending on the availability and accessibility, the use of a dosimeter could be used to pre measure the load for roles throughout a show (Zuim, Stewart & Titze, 2023), enabling the creative team to be aware of the vocal demands. More often than not, the load for the principal leads is considered however the ensemble are often not given the same consideration (Cohen, R. 2010) when some of their tracks are just as, if not more vocally demanding. Once the vocal load has been identified, it would be useful to offer performers a clear vocal structure of the process, similar to the previous training analysis that would be provided for athletes, offering some suggestions to mitigate fatigue.

Marking within rehearsals

A potential suggestion to allow performers to support a heavy vocal load could be marking within rehearsals. Marking can be done in a number of ways such as; singing with reduced volume or effort, amending the pitch to a narrower range or singing only selected parts of the score*,* all of the above offer opportunity for the vocal load to be reduced and a chance for performers to reduce vocal fatigue with an aim to preserve their voice. When marking, full support within the body is still required to ensure efficient breathing is not compromised and marking must be done correctly to avoid any unnecessary strain (Whitehead, 2013; Chapman, 2016; Fleming, Titze & Fleming 2017). It is crucial that the acceptance of marking should be clearly stated within a rehearsal schedule or verbally to the performer (Fleming, Titze & Fleming 2017), as often performers are cautious to mark, especially young graduates wanting to impress the creative team and not be labeled lazy or unreliable (Williams, 2022)*.* Within a 2017 article written by Fleming, Titze and Fleming, whispering is also suggested as marking strategy, however there are a number of conflicting views regarding whispering for singers, as an example, Robert Sataloff *et al* discuss how whispering can create laryngeal configurations than can sometimes be more traumatic for the vocal folds. There are multiple ways to whisper and more often that not performers are unsure of how to whisper in the correct way, potentially causing more damage (Sataloff *et al.,* 2019). A similar conclusion is made by Rubin *et al,* who state that whispering is more traumatic for some voice users but not for others, therefore the way someone whispers must be considered before offering this as a suggestion to preserve the voice (Rubin *et al.,* 2006). To summarise, I believe marking should be clearly embedded into a rehearsal process where appropriate as a preventative method as oppose to a response of vocal fatigue. In addition to this, performers should be clearly guided by a voice professional on how to correctly mark when asked to do so.

Larynx Massage

Larynx massages are often offered to professionals throughout a rehearsal process or during a show period but how frequently and how beneficial are these treatments for professional voice users? Larynx massages have proven benefits of releasing tension and assisting the ability to maintain vocal endurance (Leppänen *et al.,* 2009). Patients can experience immediate effects after laryngeal manipulation such as increased resonance and decreased hoarseness and those who have frequent treatments over a period of time can notice an increase in vocal stamina, range and flexibility (Rubin, Lieberman & Harris

2000). Laryngeal therapy is often linked to voice disorders and professional voice users tend to arrange therapy when feeling vocally fatigued or when they are experiencing any abnormality within their voice (Sataloff, 2017). I am interested in preventive action as oppose to corrective action and interestingly Rubin also states that laryngeal therapy enables a "*shorter recovery time following laryngeal exertions"* (Rubin, Lieberman & Harris 2000) which is exactly the prevention that performers require prior to engaging in a contract which will require them to sustain a heavy vocal load. It would be interesting to pose a study where a performer receives laryngeal therapy for six months prior to a performance contract to see if there is a noticeable difference in recovery time against a performer who only starts treatment during the performance contract.

Rest Periods

When performers enter a show period, after rehearsals have finished, a usual show schedule allows them one day off per week and four mornings/early afternoons off, aside from their day off (Deer & Dal Vera, 2021). Although it may be classed as time off, during this time they could potentially be; auditioning for their next job, taking classes to continue their training or if working on a touring production, travelling to the next venue (Germeten, 2023). Time off could be crucial in allowing performers to mitigate fatigue and enabling them to give their voice the required rest. During their rest time performers need to ensure they are undertaking preventative treatment or exercises to allow their voices to consistently support the heavy vocal load required of them in the show (Lücking & Claßen 2023). Preventative is the key word, as often performers wait until they discover a difference in their voice before giving it the care required (Sataloff, 1981). Investigations show that both voice rest and controlled phonation exercises can improve vocal endurance (Fujiki, Huber & Sivasankar 2021). When performers are undertaking a heavy vocal load, they should be ensuring they give their voice the required attention afterwards, for example, after taking part in a marathon, recovery strategies are encouraged to allow runners to return to training as quickly as possible whilst preventing injury (Wiewelhove *et al.,* 2018), which echoes my earlier reference to Rubin discussing the preventative benefits of laryngeal therapy (Rubin, Lieberman & Harris 2000). There are a multitude of ways performers can take care of their voice (See Appendix C for suggestions) and each performer will eventually find their own preferred method, however, it should be the duty of the musical director or vocal coach on the show to offer performers a guide on how to maintain their voice throughout a show period.

Conclusion

To conclude, although performers must develop a clear awareness of their own instrument, it is the responsibility of musical directors, voice coaches and other voice practitioners to ensure they are aware of the vocal load they are about to endure. When competing, an athlete is always aware of the distance they are about to travel and the potential bumps that may lie ahead (Myburgh, 2003), therefore the same information must be offered to performers. In line with the adage ‘y*ou cannot manage what you cannot measure’* professional productions must develop a way to accurately measure the vocal demand that each performer in a cast must carry and musical directors and vocal coaches must prepare performers with a variety of tools to mitigate the potential fatigue they may encounter. As Heman-Ackah *et al* said “*preventative medicine is the best medicine”* (Heman-Ackah *et al.,* 2009, p.467).

Reflective Evaluation

When reflecting throughout this process I was immediately drawn to Brookfields model (Brookfield, 2017). I found that using the four lenses; autobiographical, client, co worker and theoretical allowed me to approach my study with a number of different viewpoints. Upon reading interviews with Brookfield and studying a number of his papers, his emphasis on the idea that teachers never have and never should stop learning (Brookfield, 2017; Brookfield, Rudolph & Yeo 2019) echo's my viewpoint entirely which I believe led me to connecting with his model. Although Brookfield focuses on four lenses, I was more inclined to stick to three and didn't use the co worker lens due to working predominately independently as a vocal coach. The autobiographical lens allowed me to reflect on my time during training and source literature that I feel would've benefited and been relevant to me throughout this time. With my study focusing on professional voice users identifying their own voices, Brookfields client lens allowed me to reflect on feedback and terminology students have used when discussing my chosen topic within lessons, again allowing me to source literature that was reflective and supportive to the feedback given. Finally, the theoretical lens fulfilled my desire to continue to learn and discover new and exciting research. As a practical and critical thinker, aside from Brookfields model I also researched into Ghaye's reflective model to allow me to find an appreciative outlook upon reflecting (Ghaye, 2010).

When beginning my paper, I had a clear question in mind with multiple areas of study. I categorised all my topics and then began sourcing literature, within each category I made note of a number of experts and papers I was already familiar with that I wanted to explore further and from there went on to explore a vast amount of peer reviewed literature. Interestingly, upon finding new literature I realised some of the papers I was previously familiar with were now slightly outdated and upon looking at some of these papers with Brookfields client lens, I concluded that some papers were now not as relevant to training in the present day, in terms of terminology and where the industry stands now (Brookfield, 2017).

Originally I was researching into *'the difference between Vocal loading and Vocal Dosing'*, however upon examining the literature it became clear to me that the two are very much interlinked. When searching for a definition or clarity with the meaning of each term, it slowly became clear to me that in fact, there was no clear explanation or clear definition (Hunter *et al.,* 2020). At first, I struggled with not being able to write down an exact

explanation within my paper, however after looking at this using Brookfields autobiographical and client lenses, this allowed me to come to the conclusion that this may be the issue! (Brookfield, 2017) Which then slightly altered the direction of my study, acknowledging the importance that regardless of definitions we must relay information in a way that our clients and students understand and can relate to.

Once I had altered my question to reflect the study I wanted to pursue, I quickly felt overwhelmed with literature and struggled to condense all the information into one paper. I used Kolb's reflective cycle with a key focus on *abstract conceptualism* to think back to when I was in training and analyse the key elements I felt were missing from my education (Kolb, 2007). I considered the information that would have allowed both myself and others to develop a clearer understanding of vocal loading and condensed the information to focus back from the perspective of a performer or student.

A prominent hurdle I faced when researching was analysing the different terminology used when discussing the musical theatre voice (Harris & Irene 2020). Although I didn't end up including this within my final paper, it was interesting to note that there is still a lot of conflict within vocal terminology and this made me reflect with Brookfields client lens, on how students must adapt to contradictory terminology and how a resource for students to make connections between differing terminology would be a helpful guide for them (Brookfield, 2017).

When reflecting on what I have learnt throughout this study it emphasised my motivation to ensure all my students are best prepared with the preventative guidance and knowledge when heading into an intensive performance contract to help them mitigate fatigue upon performing with a heavy vocal load. However it also allowed me to reflect on the fact that we cannot control what every student is being taught, therefore this re-emphasised the importance of vocal hygiene education within drama school training.

Upon reflection of my study I created my PDP, which was an enjoyable experience! It allowed me to evaluate my current knowledge along with any gaps and I've identified some courses that excite me and will allow me to offer the most up to date and well supported guidance to my students. Although the majority of my PDP is practical or science based courses reflecting on strategies that potentially mitigate fatigue, I also included a goal of making new and relevant connections within the musical theatre industry, to begin to make the links required to undertake further study in the upcoming modules.

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Appendix A

Personal Development Plan

TASK / COURSE	OBJECTIVE	IMPLEMENTATION WITHIN WORKPLACE	TIMESCALE
Intensive Vocal Massage Training Course with The Voice Care Centre.	- Develop a greater understanding of the benefits of laryngeal manipulation. - Understanding Myofascial release. - Expanding my knowledge of anatomy with a specific focus on; Sternocleidomastoids, Masseter, Temporalis and Buccinator. - Further my knowledge on common issues/problems associated with the jaw and tongue and suggested methods and treatments to support these. - Understanding the biopsychosocial philosophy in relation to manual therapy and develop a deeper understanding of this reflective method.	- I have chosen to enrol on this course to further develop my understanding of laryngeal manipulation and Myofascial release. - Having had frequent larynx massages over the years and seeing a clear benefit, I wanted to gain a greater understanding of the science behind the procedure and how tension is located and treated. - I recommend larynx massages to a number of my students and often my clients working on professional productions however I would like to have a greater understanding of how to identify specific problems within my lessons. - Following on from my study in Module 1, I would also like to develop my understanding in not only the immediate impact of a larynx massage but also the preventive benefits of the treatment. - Not all students can afford to have frequent larynx massages, therefore throughout this course I would also like to learn ways to offer safe and scientifically supported self guided massage within my lessons.	Already enrolled. Completion by May 2024.

TASK / COURSE	OBJECTIVE	IMPLEMENTATION WITHIN WORKPLACE	TIMESCALE
Attend Exploring the Manifestation of Vocal Fatigue in Singers with Dr Melissa Treinkman. In association with The Voice Study Centre.	- Develop a greater understanding of the best ways to prevent vocal fatigue, including strategies, treatments and psychological considerations. - Discuss and analyse the current research around this topic and any areas lacking clarity. - Develop a greater understanding of all the ways that vocal fatigue can present itself amongst singers.	- The majority of my clients and students are currently training at drama school on high intensity Musical Theatre courses, training to gain places at Drama Schools or working in professional musical theatre productions. Therefore vocal fatigue is something that arises for a number of students. - I want to guide my students with preventative advice along with strategies to mitigate the effects of fatigue.	Completion by June 2024.
CPD Accredited SOVT Streaming Course with RayVox.	- To further my knowledge in the difference between active and passive SOVT work. - As a frequent straw user both myself and with students during lessons, having undertaken a lot of research in this area, there are constantly new methods and materials being introduced, therefore I would like to ensure I am up to date with the most recent findings. - I would like to further understand the benefits that SOVT work can provide in relation to preventing vocal fatigue.	- As previously mentioned, I use SOVT exercises frequently within my lessons. Having conducted research within this area for the last few years I fully understand the benefits they provide for professional voice users. - As a vocal coach, I like to always continue to learn and keep up to date with new discoveries and research. New tools/apparatus within the SOVT field are frequently being released especially in terms of different straw materials and diameters. I would like to further understand the research behind this to ensure I guide my students in the best way for each of their individual needs.	Completion by September 2024.

TASK / COURSE	OBJECTIVE	IMPLEMENTATION WITHIN WORKPLACE	TIMESCALE
Make contact with Musical Directors working in the industry and shadow a rehearsal process.	- Having trained within the Musical Theatre industry, I would like to reconnect with a number of creatives working as Musical Directors in the professional industry. - I would like to discuss the level of vocal coaching and guidance included within the rehearsal process and performance period of a show. - If possible, I would like to shadow a rehearsal process to analyse the way performers are using their voices with a particular focus on; marking within the rehearsal room, vocal demand within rehearsals and preventative practise to mitigate fatigue between rehearsals/performances. - I would be interested to know the musical directors stance on vocal demand within a rehearsal process and to identify any common issues that arise for performers during the process.	- Through working with a number of students and clients in the professional industry, I manage to gain a fairly clear insight into the performers perspective of vocal health and demand within a rehearsal process or throughout a show period, along with the support and resources they are given or offered. - I would be very interested to hear the perspective from the Musical Directors who are working with the voices in the show. I would like to understand the support and guidance they give to performers throughout this process or whether they feel as though this element is lacking. - This would allow me to identify the gaps within the industry upon moving into the next module of my masters degree. I am aware this maybe a focus point for one of the projects, however I would like to make progression in making these contacts and building a relationship in preparation for these upcoming projects.	Ongoing.

Appendix B

Table describing vocal genres within Musical Theatre.

Name of genre	Description
Legit	Legit musical theatre is often known as 'legitimate' and is often linked with shows written pre 1965. Vocally, usually requiring a clean, rounded tone on a thin fold (or head voice). Some examples of shows would be; The Music Man, 110 in the Shade or a post 1965 option would be a show such as The Light In The Piazza (Green *et al.,* 2014).
Contemporary Musical Theatre	Contemporary musical theatre is a very broad genre and used to mean anything written post 1965. However, vocally, this genre includes qualities such as belt, mixing, twang and speech quality and usually requires predominantly thick fold work (or chest voice). Contemporary musical theatre often also draws similarities to pop including 'riffing or vocal embellishments' (Green *et al.,* 2014). Some examples of shows within this genre would be; Mean Girls, Carrie, 9 to 5 and Bring It On.
Pop / Rock	Again, another vast genre with plenty of sub genres within. Vocally, this genre requires a multitude of vocal qualities and techniques such as; belting, mixing, falsetto, growling, vocal distortion and the use of both thick and thin fold work is required. Some shows that fall under this genre are; Six, We Will Rock You, & Juliet and Bat Out Of Hell (Green *et al.,* 2014).

Name of genre	Description
Traditional Musical Theatre	Traditional musical theatre encompasses a mixture of both contemporary and legit vocal styles, for example some characters within the show may sing predominantly in a thin fold, whereas others use a thick fold and belt quality- such as Les Miserables, with the characters Cosette and Eponine. The scores are quite traditional with no elements of pop music that you would find in contemporary musical theatre. Examples of traditional musical theatre shows would be; Les Miserables, Jekyll and Hyde, Thoroughly Modern Millie and Martin Guerre (Green *et al.,* 2014).
Folk	Folk would usually fall under the bracket of popular music, however it is now a common genre used within musical theatre. Traditionally folk music uses a simple melody and is all about the story behind the song. Vocally using a speech quality and a mixture of both thin and thick fold work, embellishments must remain true to the music as the main goal is connection (Mills, 1974). Some examples of shows within this genre are; Hadestown, Girl From The North County and Standing At The Sky's Edge.
Rap	Rap is another genre that would often fall into a sub genre of pop. However, rap is frequently growing as a genre within musical theatre. Some would describe rap as poetry or spoken word but there are a multitude of differences between the two. Rap requires, musicality, stamina, breath support and a term frequently linked with the genres is 'flow', meaning the combination of rhythms and rhymes to create a rolling delivery. Vocally, rap uses speech quality and on occasion belt quality (Edwards, 2009). Some shows including this genre are; Hamilton, Bare, Fame and In The Heights.

Appendix C

Additional suggested ways to mitigate fatigue.

Suggested exercise or apparatus	Description and benefits
SOVT (Semi- Occluded Vocal Tract) exercises	SOVT exercises are effectively any exercise where the vocal tract is partially closed, usually at or near the lips. Some common examples are; lip trills, humming, sirening, tongue trills, on voice fricatives and straw work, with or without water resistance. These exercises are proven to increase reactive inertance, allowing the vocal folds to vibrate more efficiently and can benefit those professional voice users suffering from vocal fatigue (Hijleh & Pinto 2021).
Steaming	Steaming is a popular maintenance activity used among professional voice users. The process is simply inhaling steam from hot water, not boiling and breathing normally both through the nose and the mouth. This can be done with a specific piece of apparatus or over a pan using a towel to cover the head and contain the steam. Steaming has been proven to reduce vocal fatigue, discomfort and to enhance vocal recovery after undertaking a heavy vocal load (Gerosa & Kenny 2022).

Nebuliser	A nebuliser is another popular piece of apparatus used among professional voice users. A nebuliser usually has a mouthpiece or mask and creates a fine mist that will be inhaled when breathing normally. Nebulisers also require the use of a saline solution, proven to encourage optimum hydration. Beneficial to professional voice users in mitigating vocal fatigue and developing optimal vocal quality (Vermeulen *et al.,* 2021).