

How can we safely teach young female singers in musical theatre to “belt”?

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1. PORTOFOLIO

Introduction

Young singers tend to try to imitate the vocal styles they are listening to. Current musical trends includes vocal qualities such as heavy belting heard in Adele's performances and heavy use of breathiness heard in artists such as Billie Eilish.

The trends in musical theatre similarly asks for consistent high belting with shows such as Matilda, Annie and School of Rock in productions all over the world. Research done by Freeman et. al states that Broadway shows are being dominated by pop and rock styles. In 2014 84% of female leading roles required belting with over half of that time spent above a traditional passagio at E4. (Freeman et al, 2015, p. 495). Despite the trends in both Contemporary Commercial Music (CCM) and Musical Theatre, traditional vocal pedagogy states that young female performers should not be taught how to belt. In fact, older research claimed that the training of young singers should be delayed until the vocal folds had completely adjusted to puberty-related physical changes (Phillips, 1985, p. 20). We now know that training young voices is indeed useful, but Cooksey states that "female voices are highly vulnerable during the height of change and should be cultivated carefully during this time" (Cooksey, 1999, p. 21).

In a musical theatre industry constantly creating new demands for young performers and professional training sometimes starting from the age of 11, how can we safely teach the young singers to meet these demands? Can we safely teach young female performers between 12 to 18 years old to "belt"?

Context of Work Based Practice

I work with young professional and pre-professional performers and singers on a daily basis, teaching ages 11 to young adults in both individual and group settings; in a private teaching practice, full time specialist performing arts secondary schools, further education and higher education. Currently I have 50 individual students weekly, approximately half of them 18 years old and below, as well as working with 45 young performers in a group setting, both through individual repertoire classes in a group setting and vocal ensembles. This paper focuses on young female singers in musical theatre,

particularly between the ages of 12 to 18 years old. I see a large amount of female singers in this age group with similar vocal problems as described by Young (2019), with very heavy M1 mechanism, forced air pressure, abdominal tension and an inability to access M2 and incorporate the cricothyroid muscle. Usually, these problems come with a wish of learning how to belt higher notes.

Rationale

“We do not ask children not to play ball because their muscles and bones are still developing; we ask them to endure less so as not to become fatigued and hurt themselves. So should it be in singing. A competent child vocal pedagogist will not permit children to strain their voices because he or she will be aware of the limits of children's voices” (Phillips, 1985, p. 57). He says that some vocal teachers believe coordination comes naturally for a young singer, which is not the case. Training the muscles to be strong and agile can take a long time. “Dancers don’t train only one side of their bodies, yet many singers only use one part of their voice” (Edwin, 2011, Supplemental Singing Exercises). Edwin believes young singers must be encouraged to sing in both M1 and M2 registers “even if it sounds like two different people singing”. It is common for many teachers to ask a young singer to “sing out”, because they don’t know what else to do, and singing out usually means “belting” (Phillips, 1985, p. 22). Williams says that anything fast, high, loud and expansive may cause problems for the young singer, however, “...apart from the development of a louder, full-bodied vocal timbre, the technical possibilities for adolescent girls are not very different from those of young women who are five years older” (Williams, 2019, p. 64).

Little research has been done on young female singers belting and how to train young performers for the requirements of professional musical theatre productions. Yet, young singers are being asked to belt in shows on a regular basis, often without proper vocal instruction. In this paper, I’m aiming to create a plan of action for how to appropriately train young female singers to belt through the study of a range of theories and teaching methods for belting, taking into consideration the crucial time of voice change.

Musical Directors sometimes ask young singers to perform the most demanding tasks. From previous focus groups when researching appropriate singing curriculum for young singers in professional musical theatre education, I found that not all professional shows have an in-house vocal coach for the young performers, especially if the shows only

feature a few young performers. Often, they are simply treated as mini-adults and expected to know what they are doing. One of my previous students who performed in the UK Tour of Annie said the young performers were consistently asked to sing loud and to “belt out” - without being told how to do so. She said that many of the performers finished the tour with vocal problems - caused by a mixture of heavy vocal demands and the stress of touring. If we study the score of Annie, numbers such as “A Hard Knock Life” expects the young singers to belt up to an F5, far above the second passagio, even for an unchanged voice. According to other students, resident West End shows such as Matilda and School of Rock have specialist vocal coaches who follow the young performers very closely and also monitor vocal development and changing voices so they can always perform to the best of their ability. With the demands of young singers in the professional industry taken into consideration, is it possible to define a method to teach belting in a safe, healthy way?

Belting has for years been referred to as dangerous, especially by the bel-canto school, but Edwin et al states that all physical activity can be dangerous if you don't execute it correctly (Edwin et al, 2012, 6). Spivey gathered perceptions on belting from a range of pedagogues from “both sides of the table” and he uncovers that classically trained voice teachers have been arguing that belting is both “aesthetically offensive and deleterious to the vocal mechanism” (Spivey, 2008, p. 607) Spivey identified beliefs such as; “Belting is a term applied to the low husky masculine-sounding tones produced by female vocalists in today's popular music . . . Female vocalists can render themselves baritones for life in a short period of time as repeated abuse causes irreversible pathological changes in laryngeal tissue” (Ruhl, 1986, p. 31 - 33 in Spivey, 2008, p. 608). A general perception is that belting is a sole M1/chest voice or thick folds quality and a TA dominant sound. Conceptions include beliefs that the tone is no longer belted if an M1 quality isn't maintained and that belting is unhealthy. “...The vocalis is overworked, there is no balance of resonances, breath pressure is too high and the tone is straight. These conditions indicate a state of severe vocal misuse” (Doscher, 1988, p. 186 in Spivey, 2008, p. 608). Many pedagogues perceive belting as a recipe for disaster and injury. McCoy disagrees and says “Given the large numbers of students (and colleagues) I've known who have suffered voice injuries while singing opera, I find the concern for the vocal health of belters—an opinion expressed by many traditional singing teachers—to be disingenuous” (McCoy, 2013, 181). Saunders-Barton agrees and states that “The concern for harm was real as long as musical theatre belting was conceived to be the dangerous extension of the chest voice into the upper register” (Saunders-Barton, 2014). She says

the trick is to develop a mixed and extended middle voice and utilising the singing and speaking voice as one. Many pedagogues support this statement. Edwin refers to belting as a “co-ordinated activity of thyroarytenoid and cricothyroid vocal fold activity that, although thyroarytenoid dominant, is influenced by increased cricothyroid activity, especially as the scale ascends” (Edwin, 2011) which is supported by Roll who says that heavier M1 quality cannot be used in higher belt because the vocal cords are too thick to vibrate fast enough to create the high pitch required. (Roll, 2014, p. 76).

For the purpose of this essay M1 refers to Thyroarytenoid (TA)/chest voice/thick folds quality. M2 refers to Cricothyroid (CT)/head voice/thin folds quality.

F1 refers to first formant, F2 second formant etc. H1 refers to first harmonic.

Planned Programme of Study

Aims and Objectives

- To determine how young female musical theatre performers between the age of 12 and 18 can meet industry requirements for singing whilst still maintaining good vocal health.
- To research the limitations and possibilities of the female adolescent voice by reviewing accessible literature.
- To determine what belting is, both conceptually and perceptually by reviewing literature.
- To determine how the trends in musical theatre vocal styles is changing the demands of the young performer.
- To develop a method for safely teaching “belting” to young female performers.

Timeline

	Reading	Writing Draft	Finalise
September			
October			
November			
December			
January			

Methodology

My ontological position sits midway between subjectivism and objectivism, with majority of reading and studying carried out with a pragmatic paradigm in mind. I have been influenced by my previous research and knowledge, but have tried to keep an open mind and remain objective throughout my study. Being pragmatic whilst studying the methods of belting is important as “there is not one way to teach belting, exactly as multiple effective classical schools of singing co-exist with distinctive strengths” (LoVetri, 2002, p. 250). Pragmatism recognises that there are multiple realities and that these are open to empirical inquiry, meaning they are based on experience and/or direct observation. Pragmatism is free of mental and practical constraints and leads itself to solve issues in the real world (Creswell, Plano Clark, 2007). Creswell et al says that “truth is what works at the time, it is not based on duality between reality independent of the mind or within the mind” (Creswell, Plano Clark, 2007, pp 39 - 40). Pragmatism leans well to work based learning and is therefore useful for solving problems in the voice studio. Pragmatists hold an anti-representational view of knowledge with the epistemological purpose of being a utility (Rorty, p. ix, 1999).

Instead of evolving from something that previously existed, as in post-positivism, “pragmatism arises out of actions, situations and consequences” (Creswell, 2017, p. 39).

Dewey spent the majority of his philosophical career trying to break down the dualism between realism and idealism, similar to the attempted pragmatic separation of post-positivism and constructivism (Morgan, 2014, p. 1048). I have been attracted to his systematic five step approach to inquiry:

1. Recognising a problem.
2. Considering the appropriate approach to the problem; how does it affect the inquiry?
3. Developing a response in the form of action.
4. Evaluating how potential actions may affect the problem.
5. Taking the appropriate form of action after careful consideration and evaluation.

(Morgan, 2014, p. 1047).

I have chosen an empirical method of inquiry. An empirical method allows the student to study “how things of a designated description has been arrived at” (Dewey, 1958, p. 29)

and re-travel the route of pedagogues and researchers before me with the allowance to re-evaluate and argue.

Alongside pragmatism, I was initially also drawn to the post-positivist movement; striving to find an absolute truth but acknowledging that there may be areas that are missed when drawing a conclusion. Vocal pedagogy has long been influenced by positivist research, of a strive to find “an absolute truth”, however, movements such as medicine is now moving away from it. Why? An important source in this literature review, Roll’s PHD on Belting, is using the post-positivist paradigm aiming to find an absolute truth. This is done through the study of a range of different teaching methods leading to a conclusion seemingly absolute at the time. However, I’m hyper-aware that new research on voice pedagogy and on belting specifically is being carried out consistently. The musical theatre industry and sound ideal is constantly changing and we have to be aware of trends shifting. How do these trends affect vocal pedagogy? We have already seen changes in the way we train musical theatre singers and in the way we perceive an ideal sound. This potentially means that we can only ever have a time-limited absolute truth until new research is carried out, replacing the old. The demand for and the response to a particular answer arise because of a particular need (Dewey, 1958, p. 27), but can we find an absolute truth when we are not yet aware of what is to come trend-wise? Does the post-positivist and positivist paradigms have an unknown expiry date of the absolute, until proven otherwise? Studying Dewey has made me question whether we can ever conclude that something is permanent. Voice pedagogy is often taught as a finished product, an ideal, in mind. Dewey says that “the cultural product of societies that assumed the future would be much like the past, and yet is used as educational food in a society where change is the rule, not the exception” (Dewey, 1938, p. 19). Even though change is challenging, do we have to accept it to evolve (Dewey, 1958, p. 27)? Dewey believed in an existential reality that have different layers; subjective, objective and a mix of the two (Dewey, 1958, p. 40). He said that no one can predict what will emerge in place of the stable world (1958, p. 172).

I have taken a thematic approach in my study, meaning the reading and study has been approached to find specific patterns in the data (Joffe, 2012, p. 209). Using thematic analysis gives the opportunity for flexibility in studying qualitative methods (Braun & Clarke, 2006, 6 - 7). The patterns found can take form as explicit and implicit content, referring to a mix of objective and subjective themes. The themes identified in my study are mainly *deductive*, meaning they have been derived from existing theories. At a later

stage I would be interested in presenting inductive data derived from own qualitative research, however, that has not been the focus for this desk study. Braun and Clarke warns the researcher from taking a passive role in the data collection, allowing themes to “emerge” as it requires analysis to actively draw lines (2006, p. 7). I have used Mendeley to help me code and find arising themes, which I have categorised under subjects in my notes, however, I do also believe themes “emerge” passively in our heads as we learn and take an active role when being tried out in the voice studio.

In this independent study I have aimed to mix my subjective, though research based, opinions and previous experiences with an objective mindset with the view to find a conclusion that is correct at the time of print. I have chosen my themes re-analysing the conclusions others have made before me, however, I acknowledge that the material I have chosen to study, though chosen for a reason, is only a fragment of the whole picture.

Saunders-Barton and Spivey end their book on Cross-Training in The Voice Studio with the following quote;

“We stand on the shoulders of all who came before, in addition to those who work right alongside us. If we allow ourselves to keep sharing, learning and growing, the best lessons we teach will be the ones we teach tomorrow” (Saunders-Barton, Spivey, 2018, p. 120).

Critical Reflection

For my critical reflection I have been influenced by Gibbs Reflective Cycle, also called Gibbs model of reflection. This model has also previously helped me structure my reflections. Originally, this model was developed as a de-briefing exercise which could be why it appeals to me. “It is built on Kolb’s Experiential Learning Theory and proposes that theory and practice enrich each other in a never ending circle” (Finlay, 2008, p. 8). I have also been influenced heavily by Cottrell’s Core Model for Reflection: Evaluate, Reconstruct, Analyse, Distill and Apply (Cottrell, 2017, p. 203). This influence was important particularly as I noticed a reflective stage occurring prior to the descriptive phase as used by Gibbs, affecting my pathway of choice and programme of study. The critical reflection helps put theory into practice as well as providing “a bridge between practical experience and academic study” (Cottrell, 2017, p. 205). I have found the works

of Dewey particularly useful, especially his empirical method of reflection (Dewey, 1958, p. 30).

My focus of study showed itself as a clear pathway as I regularly saw more and more young students coming to me with a wish of learning how to access higher belt. At the same time I observed many young singers straining whilst singing, particularly through the second passagio (B4 - D5), often trying to imitate the sound of a singer they had heard on a cast recording or soundtrack. Cottrell asks in her examples of prompts if you're too affected by a subject to reflect over it as part of an academic assignment (2017, p. 203). This could ring true to part of my process of study, as I sometimes asked myself "where do I start with this voice" or "how can I possibly get this singer ready for upcoming assessments in time". However, my attachment with the subject matter positively answered other prompts: Does the study provide enough challenge and material? Are you likely to be in a similar situation again (Cottrell, 2017, p. 203)? This provided reasoning for my selection of texts to study and methods to imply. Not only does my programme of study provide me with demanding, but overcoming challenges, due to its consistent repetition of cases in the voice studio, it also reveals itself as a necessary focus for my current and future career as a singing teacher. As my previous study has consisted of researching the requirements of belting in female musical theatre performers as well as looking at training regimes for young professional musical theatre performers, studying how to train belting for young female singers seemed a natural transition.

Reconstructing my initial process of study, the phase 1 reflection, uncovered the realisation that there is little specific research done on how to train young performers to belt. I questioned whether my whole independent study was pointless or maybe even wrong? Was the preconception that belting is dangerous for young performers true? Then why were my young performers consistently asked to belt in a professional setting? How come the Afro-American idea of singing is so focused on belting unlike the Western tradition? From experience, I have *heard* some of my young, experienced students belt to a high standard. I have experienced first-hand *how* they utilise a TA-mixed voice, so subjectively I knew there was a way. Reading the work done by Saunders-Barton on cross training for young singers as well as re-visiting her work on speech to song became key literature. I realised that I couldn't write about a training regime for belting for young singers without including a section on cross training.

Williams state that "...apart from the development of a louder, full-bodied vocal timbre, the technical possibilities for adolescent girls are not very different from those of young women who are five years older" (Williams, 2019, p. 64). I found the importance was to have an awareness of each young singer as an individual. As long as you were able to truly understand their voice and where they sit in the stages of vocal change, training a young female singer to belt wasn't necessarily so different from training a young adult singer to belt. They would all be at different technical levels, and monitoring this was what mattered. This is supported by Dewey who says a teacher has to deal with diverse personalities individually (Dewey, 1938, p. 56). Also Yarnell refers to young students as being in need of individual treatment and states that particularly adolescent singers may seem different from week to week, almost as if they have a multi personality complex. (Yarnell, 2006, p. 81).

In previous studies, my phase one reflections have at time felt "fragmented" with different themes seeming important at different times (Cottrell, 2017, p. 198). This time, I felt the opposite, that everything I read was important at all times and instead of wondering *what* to write, I was questioning *how* to write it. It was a relief when everything I read suddenly started to make sense. I remember feeling as if I was in some strange cult with LeBorgne, Saunders-Barton, Spivey and Roll leading the way and we were all headed in the same direction. In philosophical terms my empirical inquiry had led me to walk the path of others before me with my investigation making an addition to junctions and path ways already studied. Clear themes started to arise as I gathered my notes together; *primal sounds*, *speech to song* and *cross-training* were particularly prominent (Chapman, 2017, Edwin et al, 2012, Kayes, 2004, LeBorgne & Rosenberg, 2021, Roll, 2018, Saunders-Barton, 2005, 2013, 2014, Saunders-Barton & Spivey, 2018) alongside belting being perceived as being *forward and mixed with a high larynx and use of twang*.

I started using Mendeley for the first time to help me organise my literature, take notes and put them into a system. I find it very helpful keeping all the articles in one place and being able to use the search functions to navigate through various themes and specific authors.

I realised that I was starting to establish my own teaching method and training order from what I had read - without this necessarily being my initial aim - and slowly but surely started to see a new kind of development in my young singers, also helping me identify themes and key exercises. Ironically, my biggest challenge throughout my study was the fact that I was teaching such a large amount of the time, even when in lockdown. I had

the opportunity to try and test my acquired skills and theories on my students, but lacked time to actually write. Nevertheless, it somehow seemed to give focus to my writing, giving me an ability to test and try exercises and theories, some over a period of three months and particular ones on new students, starting to notice improvements in many areas. This would be an interesting subject for further research.

On reflection, I realise that this independent study has proven incredibly useful to further my existing knowledge in the area of belting as well as providing a fundament for a clear teaching method that can be applied to all my students of all ages. To summarise, the work on this independent study has been a truly valuable experience, providing inspiration and key themes for future research on the subject matter.

2. ASSIGNMENT

Literature Review

History

Traditionally, singing in musical theatre occurs as an expansion of speech; when the character can no longer portray what they need to say through speech but needs to break into song. Similarly, belting occurs when it is no longer enough to sing, we have to “belt” to show heightened emotions such as anger, desperation or excitement. Belting needs to happen in moments in time at our most heightened emotional state, “in extremis” (Kayes, 2004, p. 156). In musical theatre repertoire for children and teenagers great examples are “Revolting Children” from *Matilda The Musical*, “Stick it to the man” from *School of Rock* and “It’s a hard knock life for us” from *Annie* where the children are showing moments of anger and determination. All these numbers have the majority of the melody written above the primary passagio (F4) and sections in the range of the second passagio (C5 - Eb5). Historically, the style of belting has evolved over time, originally introduced in the 1930s when composers and lyricists were trying to explore ways to represent characters personalities through musical numbers. “To have characters sing in the manner in which they talked required females portraying certain roles to develop a new way of singing to sound real and relatable to audiences” (Roll, 2014, p. 2). Ethel Merman’s original version

of “I got rhythm” was the starting point for the so-called traditional Broadway Belt, with an intent to sound the same way as a person’s speech quality but at the same time being heard without amplification. The original “Broadway-Belt” is a heavy M1/TA dominant vocal quality and was used by character roles in musicals, usually roles that were funny, quirky or feisty (Kayes, 2004, p. 156). However, traditional Broadway material for the leading lady was usually never higher than a Db5, just below the second passagio, meaning the thicker folds are still able to vibrate quick enough without strain. In today’s musical climate musical theatre composers are constantly breaking barriers as to what the female voice is capable of, with the money note climbing higher and higher. Notes are intended to be belted all the way up to an A5 in certain material. Once Upon a Time from the musical Brooklyn is a prime example. With new contemporary musical theatre a new singing style has evolved, and the first to try imitate the trends are usually the young singers.

The Female Adolescent Voice

Young states in her research on underdeveloped registers that one trend in young women is to carry the chest voice quality (M1) higher than what is generally acceptable in classical singing (Young, 2019, p. 137). She believes that it could be easier for an unchanged voice to imitate a high belt as the voice will sit higher, but that we might meet issues as the voice drops a third and the higher TA dominant register is no longer as accessible (p. 150). For a long time the changes happening in the female voice through adolescence were less talked about and little time was given to study it. However, in recent years, interesting studies have been carried out with prominent research by Cooksey, Gackle, and Yarnell leading the way. They have identified various stages in female voice change with the main changes occurring on the onset of menarch.

Gackle (2014) refers to three stages:

STAGE I: Pre-pubertal (Unchanged): Clear/Flute like and agile.

STAGE IIA: Pre-menarcheal: Beginning of mutation: Range is approximately the same as previous stage, but huskiness/breathiness may show an appearance. Some register changes may appear in first passagio F#4 - A#4. Some girls experience loss of upper range.

STAGE IIB: Post-menarcheal: Pubertal; High point of mutation: Huskiness/Breathiness throughout the register. Register changes now also apparent in second passagio D5 - F#5. Lower range easier to access which may appear as “alto” quality.

STAGE III: Young Adult Female: Richer tone and increase in range. Voice re-establishes flexibility and breathiness is reduced. Register change still apparent in second passagio. (Gackle, 2014, pp. 5 - 6).

Yarnell (2006) identifies a similar model of five stages, but also touches on psychological factors. She states that the third stage, around 13 - 14 years of age (similar to Gackle’s post-menarcheal), is the trickiest stage when voices are unreliable and it is difficult from a pedagogical point to keep students motivated. Students at this age are often very self-aware and lose their confidence quickly. It is important to pick appropriate and motivational repertoire during this stage, but being aware that students may try to imitate a “belt” to reduce breathiness. Yarnell says this is not always advisable at Stage III (Yarnell, 2006, p. 83) but also recognises that adolescent students are highly individual and must be treated thereafter. Some may not experience any difficulty at all (p. 81). Breathiness in female changing voices is at least partially due to the presence of the “mutational triangle” or “glottal chink” which refers to the incomplete closure of the posterior part of the glottis resulting in weakness in the inter-arytenoid muscles (Gackle, 2014, p. 3). Williams says the adductory muscles can be strengthened and breathiness reduced or eliminated with technical exercises (Williams, 2019, p. 63).

During adolescence, the vocal folds of the female increase in size approximately three to four mm. The lower limit of the girl’s vocal range falls approximately the interval of a third, and the upper limit rises slightly. When voices are unchanged, many children show signs of two “separate registers”; one TA dominant and the other CT dominant. Where the voice predominantly sits is usually based on the music the child listens to or the singers they idolise (Edwin et al, 2012, p. 3).

Saunders-Barton say we have to teach young singers to self-monitor: “Young performers want to please. They might be inclined to do anything they are asked without checking in with their self-monitor” (Saunders-Barton, 2014). For a young performer to self-monitor, as a basic, some understanding of vocal placement and registration is important. Young says: “At no time in history has it been more important for the voice teacher to be a master of the subject of registration” (Young, 2019, p. 150).

What is belting?

The term belting has resulted in a lot of debate throughout the years. One of the terms pioneers was Jo Estill with her Estill Voice Training and Figures for Voice in 1988.

LeBorgne says the term can be described as a noun, verb or a style, but not a voice classification such as *coloratura soprano* (LeBorgne, 2020). Edwin et al says that healthy belting is a mix of TA and CT muscle activity alongside specific resonance strategies (Edwin et al, 2012, p. 6). Saunders-Barton and Spivey refers to Belt as a mixed quality above the F4 passagio “as an optional resonance or colour” (Saunders-Barton, Spivey, 2018, p. 47).

Pedagogues and researchers specialising in “belting” all agree that a belted sound must have a forward resonance (LeBorgne, 2021, Roll, 2018). A bright, forward sound whilst elevating the larynx will raise the F1 to 1200Hz in females and create a belt sound quality without solely using thyroarytenoid contraction (2021, p. 111). LeBorgne refers to seven vocal resonators; two subglottic; chest and trachea, the laryngeal vestibule, the pharynx (oropharynx, nasopharynx, laryngopharynx), the oral cavity, the nasal cavity and the sinus cavities (LeBorgne, 2021, pp 93-94). This is referred to as the seven zones when training accents and voice for actors; 1: The Teeth and lips, 2: The Gum-Ridge, 3: The Hard Palate, 4: The Soft Palate and Uvula, 5: Down in the pharynx, 6: Up into the Naso-Pharynx, 7: The Nasal Cavity (Rowles, Sharpe, 2009, p. 29).

A forward placement, such as in belting, is “typically associated with a “bright” timbre” (LeBorgne, 2021, p. 105). /I/ as in “Heed” and /i/ as in “Hid” are vowels commonly used to encourage a forward placement and should form a sensation in the oral/naso-pharynx resonance (p. 105). The /i/ brings the edges of the vocal folds together so that less airflow is needed for phonation (Carter, 2018). Resonance should be directed away from the throat with sensations aiming for teeth and head cavities (Jennings, 2014, p. 18). Both /i/ and /I/ are high front vowels, meaning they will have a high F1 frequency and a low F2 frequency. “The typical vocal tract configuration for an /i/ vowel ... is a widened pharynx and narrowed oral cavity.” (LeBorgne and Rosenberg, 2021, p. 107) Kayes supports this and states that “the formants of the front vowels range to higher frequencies than those of the back vowels” (2018, p. 100). Belt utilises open vowels to approximately D5, from there all vowels are closed (Saunders-Barton, Spivey, 2018, p. 47). Sundberg et. al believe a belted sound has to be produced with an elevated position of the larynx to match the first formant with the second harmonic (Sundberg et al, 2010,

p. 49). This is supported by Schutte and Miller who explain that by raising the larynx the decrease in the size of the pharyngeal cavity will raise F1 (Schutte, Miller, 1993, p. 147). This can be achieved by dropping the jaw and spreading the lips to and may result in the bright sound associated with belting (LeBorgne, Rosenberg, 2021, p. 110 - 111). In Classical Singing you may modify vowels for better resonance, however in musical theatre the text always has to be at the forefront to drive the story forward. For musical theatre, Kayes therefore recommends so called “medialisation” rather than “modifying vowels” as commonly executed in classical techniques and choral singing. She says this requires you to differentiate the vowels in the middle of the tongue rather than the front and back. “This in turn will adjust vowel formants, enabling you to equalise the vowels for resonance. Using medialising you will be more easily heard and more voice-efficient.” (Kayes, 2018, p.100.) “When vowels are “tuned” appropriately, the shape and the response of the resonators behave in such a way that it helps provide and acoustical “boost” to the sound” (LeBorgne, 2021, p. 98). It is important to note that physical features will affect the level of brightness to the sound; a shorter distance from the vocal cords to the lips will make the sound perceived as brighter (LeBorgne for BVA, 2020). It is also argued that singers with a naturally shorter vocal tract may be at lower risk for vocal trauma (LeBorgne, Rosenberg, 2021, p. 110). Because belting naturally calls for an elevated larynx, Young states that constriction in the pharynx and tongue may occur and that the raised larynx may cause problems for articulation because it reduces space for the tongue, jaw and the hyoid bone (2019, p. 147).

Belting has a naturally high subglottic pressure and a closed quotient of up to 70%. Estill believed that speech has the highest quotient and opera the least closed quotient. “As far as belting is concerned, the folds remain closed more or less than 70% of every cycle across the two octave range” (Estill, 1988, p.39). More recent research by Sundberg et. al (2011) supports Estill’s findings but show that the VQ for belting is slightly lower, but consistently above 50%, with speech-like having the highest VQ.

Kayes refers to belt as “a mix of speech and twang with a high larynx and the thyroid tilted backwards” (2004, p. 158). Accessing twang can help balancing in registration. Twang is important to help the voice move freely through the registers, in musical theatre genres particularly to disguise the passagio when moving from TA dominant to CT dominant vocal functions. Twang is formed in the pharynx, also called the epiglottic funnel, the area above the vocal cords. and must not be confused with the nasality created in the nasal cavities. The aryepiglottic sphincter, two bunches of muscles located

on the top of the vocal folds which connects them to the epiglottis, tightens and pulls them in, creating a form of compression by narrowing the passage of sound at the exact moment the sound is about to reach the mouth (VocalZones, 2019). Miles and Hollien (1990) claim that belting has a high level of nasality, but Sullivan disagrees and state that it is important to note that although belting may be considered nasal, it never is (Sullivan, 1989. p. 42). LeBorgne says it is important to note that twang and nasality are two separate entities. Sadolin, the founder of Complete Vocal Technique, says; “When twanging, the opening of the epiglottic funnel is made smaller by bringing the arytenoid cartilages closer to the lower part of the epiglottis” (Sadolin, 2012). This means the sound is compressed which creates a high, piercing resonance. LeBorgne describes twang as an “acoustic result of a longer closed quotient during the vibratory cycle, H1-H2 is smaller than neutral singing, F1-F2 is higher and F3 and F5 are lower in twang as compared with neutral singing” (LeBorgne, 2021, p. 108).

Expectations of the Young Female Performer

Young says: “Directors no longer ask for ability in only one type of singing. Female singers need to be adept in both legit and belt styles” (Young, 2019, p. 150). It is no longer enough for a musical theatre performer to master “musical theatre singing” as musical theatre nowadays may include any genres from rock (We will rock, Rock of Ages, Bat out of hell, Heathers) via commercial styles such as pop, hip hop and R&B (Six, Hamilton, In The Heights, Everybody’s talking about Jamie) to operetta and even opera (Phantom of the opera, Light In The Piazza). Jukebox musicals; musicals based on music by specific bands, artists or songwriters that is already written and adapted into a show, are gaining popularity. Recent productions includes & Juliet based on the music by Max Martin on The West End and Jagged Little Pill based on Alanis Morissette’s music on Broadway. These are produced side by side by the classics such as The King and I by Rodgers and Hammerstein and even contemporary legit shows such as Light in The Piazza by Adam Guettel, emphasising the need for versatility in musical theatre training. Many researchers and pedagogues mention the need for cross-training the young musical theatre singer to balance registers with “optimal range, timbre and agility” (LeBorgne, Rosenberg, 2021, p. 124), among them LeBorgne and Rosenberg (2021), Saunders-Barton & Spivey (2018) and Edwin & Williams (2013). LeBorgne and Rosenberg says “within the cross-training, singers must learn to navigate a heavier weight to the voice as they ascend in frequency

with appropriate resonance strategies (jaw opening, bright vowel tuning) to counter balance what is happening at the laryngeal level” (2021, p. 124). They believe in a pedagogy that exercises “optimal physiologic range, agility exercises to meet market demands, exploration of timbre differences and production in all parts of the vocal range, and laryngeal muscle activity levels and development to facilitate various types of closure patterns” (p. 124). LeBorgne states that most children can yell healthy and can therefore learn to belt, but that they have to sing in their head voices too (LeBorgne for BVA, 2020). Bourne et. al supports this argument and says that female musical theatre singers need to train both the thyroarytenoid dominant - M1 - and the cricothyroid dominant - M2 - functions in their voices to develop a balanced sound. Saunders-Barton states that a young female singer who is not able to speak comfortably above her primary passagio (around F4) will find it impossible to access speech quality and belt in this range (Saunders-Barton, 2013).

From Speech to Song

“Speaking exercises, calling out, delivering a Shakespeare monologue, are all ways to assess the flexibility of the speaking voice. There should be no feeling of adjusting in order to sing because the speaking voice should be flexible enough to mix in many different colours, high and low, to express different emotions” (Saunders-Barton, 2013).

Vocal pedagogues such as Seth Riggs believes with his Speech Level Singing Technique that a neutral larynx is the ultimate and that we can sing everything the way we talk. This may not be entirely true when we look at the set up for belting, but Riggs had some good points when he stated that when we are speaking we focus on communication rather than how to create a nice tone, which again means the larynx is relatively stable, what he refers to as speech-level (p. 29, 1993). Melton similarly states the importance of actors and singing training being more similar instead of being taught as different disciplines. Singers are often obsessed with sounding beautiful rather than using the appropriate characterisation and it is easy to forget that we in fact have *one* voice (Melton, 2003, p. 6). Sometimes, I get students in the studio who will open their mouth to sing with a completely different vocal quality to how they speak. Now of course, in musical theatre, our vocal qualities vary if we are playing a specific character or singing in a vocal extreme, however, the fundamental singing voice should be an extension of speech. Saunders-Barton says that “...women need to have complete acoustical control of their instrument,

speaking and singing” (2013). She believes that speech to song exercises can train the muscles of the larynx more efficiently than traditional anatomical models. This particularly applies to younger singers who, from my experience, get confused when presented with advanced anatomical language and endless technical exercises. Finding out where their natural speaking voice sits, and measuring it regularly, especially if they are in a process of voice change, is important. As Cooksey identified, the fundamental speaking pitch may descend by three to four semi-tones in the female voice during voice change (Cooksey, 1999, p. 7), and keeping a track record will give you as a voice teacher invaluable insight into your student’s voice. If a flexible speaking voice is managed, a versatile singing voice is more achievable. With young singers, primal sounds is an excellent way of trying out what is vocally possible. Primal sounds refer to “natural vocal reactions” and these sounds non-articulated will be the first development phase of the voice in childhood, meaning they are a natural and safe way of strengthening the vocal muscles as well as developing palatal control. Chapman says these sounds are particularly useful as they give “access to the basic coordination available from the emotional nervous system” (Chapman, 2017, p. 19). This means utilising the primal sounds should access our muscle memory directly instead of having to focus on *how to*. Titze identifies the primal sounds as grunting, sobbing, moaning, crying, sighing, yawning, squealing, coughing, giggling, laughing, snoring, growling, barking, shouting, frying, creaking, trilling (lips, tongue, razz), whistling, screaming, humming, ingressive creaking, bleating (2001, p. 162). It is useful to begin with exercises to isolate the soft-palate such as panting like a dog which may introduce sensory awareness (Saunders-Barton, 2013). “Hooting” is a particularly good exercise to establish whether breathiness is due to a changing voice or lack of support and air flow issues. Williams also recommends working on higher pitches with energised sounds. This should help to feel a sensation of higher pitches to become less shouty and avoid strain (Williams, 2019, p. 31). If a singer can “Woo” with a high energised, clear sound the possibility is there to sing it too.

I usually introduce “calling” exercises to find different resonators and accessing different muscles. These exercises should be executed very energised, but I always encourage trying them out at different dynamics. Exercises should be started around an G4 in a spoken voice and ascend in pitch. The student should feel a natural sense of support in the so called “diamond of support”, engaging the transverse abdominis and the external and internal obliques (Chapman, 2017, p. 48).

Accent training can be very useful to access particularly placement. I often get my students to say “Oh My God” in a heightened General American accent. We then play around with twang, trying to differentiate nasal and oral twang. This will help us find the forward resonance we require as well as the open mouth and spread lips. We can find the resonance required by mimicking and having fun with characterisation. An American /æ/ is useful to find a belted sound, rather than the back placed British /a/ (Saunders-Barton, Spivey, 2018, p. 47). Other ways to find twang is to speak or laugh like a witch or pretend to be a bratty, spoilt child. Edwin encourages the young singers to bring the characterisation of the characters to life (Edwin, 2011, Supplemental singing exercises).

Working on speech to song exercises should allow the student to find a dynamic range of vocal registrations, which can form a healthy fundament to execute various vocal qualities in song.

Speech to Song exercises can be found in Appendix A.

Cross-training the Young Singer

What is your vocal ambition, I ask my new 17 year old singing student. “To be Elsa on Broadway”, she answers without hesitation. “And to learn how to belt high notes”.

In the voice studio I often see three types of young female singers;

1. The singers that want to belt everything!
2. The “it-sounds-ugly” singers that are scared to project because they are afraid of straining their voices or “sound ugly”.
3. The singers that have developed such a strong mixed voice quality that it is difficult to change their resonance.

Interestingly, my new 17 year old student belongs to group number two. I somehow have to convince her that for us to start her journey to become Elsa she first has to “solve problems like Maria”. Some young singers coming from an Afro-American training background such as gospel may show scepticism towards Western classical traditions and show negativity towards learning to access the CT muscle. Edwin recognised that vocal sounds are often a result of a cultural bias. Young singers coming from a classical choir background usually have the opposite problem, and will often refuse to sing anything loud and twangy (Edwin et al, 2012, p. 5). They may often try to “belt” in the way they sing classical material. I have personally experienced this in the voice studio on numerous occasions. Saunders-Barton refers to her training programme “bel-canto/can-

belto” and emphasises the importance of making a student aware that “the best singer is the most flexible singer” (Saunders-Barton, 2013). To be able to belt in a healthy manner that can last eight shows a week, a strong M2 quality is crucial, even for young singers, and should be the first point of call when addressing training order. Young also mentions important factors such as an indication of vibrato and a sustained, legato sound as pointers that a singer is ready to “belt” (Young, 2019, p. 146), however, we have to remember that a younger singer may find expansive phrases difficult (Williams, 2019, p. 64).

Cross-Training for singers is recommended by a range of vocal pedagogues and researchers including LeBorgne and Rosenberg (2021), Saunders-Barton (2013, 2014, 2018) and Spivey (2018), McCoy (2016) and Edwin (2012). Young says cross-training is important for vocal health (Young, 2019, p.150) and Saunders-Barton states how laryngeal and acoustic flexibility are essential for musical theatre performers (Saunders-Barton, 2013). Young female singers must exercise their entire voice, both TA and CT dominant qualities (Edwin et al, 2012, p. 6).

Cross-Training should not be confused with “Cross-Over” which often refers to a somehow “imitated” classical sound or inauthentic style (Saunders-Barton, Spivey, 2018, p. 22). Instead, cross-training refers to training in both classical and traditional musical theatre techniques, not necessarily to be able to perform in both genres, but to develop the strongest voice possible (p. 22). Saunders-Barton and Spivey says it is rare for a musical theatre performers nowadays to specialise in one style of singing, simply as the market demand for versatility is increasing (2018, p. 29).

Saunders-Barton says that she will never let her singers belt until they have developed a solid M2/CT dominant quality. Alongside Saunders-Barton, LeBorgne and Rosenberg are among the pedagogues strongly suggesting cross-training the musical theatre singer to help “create equilibrium in the mechanism and prevent difficulties from lack of balance” (2021). The muscles function as agonist/antagonist partners to the TA and CT muscles. This is also referred to as “reciprocal inhibition”. When one pair is relaxed the other is contracted (Young, 2019, p. 146). Quite often, I get singers in the voice studio who have no developed M2 at all, instead the voice is what Riggs refers to as “muscled up” (1993, p. 77). This is a good example of imbalanced voices where the TA muscle has been allowed to dominate. In these cases it is particularly important to re-introduce the CT muscle to re-establish the balanced voice. Once the M2 and M2 dominant mix sound

is stabilised and coordinates well with the M1 quality, and only then, belting can be introduced (Saunders-Barton, 2013).

It can be difficult to access a CT dominant sound by ascending to it (Edwin et al, 2012, p. 3), instead Williams recommends “blurring the boundary and bringing the upper voice down beyond the pitch of the usual register change” (Williams, 2018, p. 64). Descending scales are recommended, working towards developing a non-audible passagio. These exercises can be used to de-train the muscle memory from making automatic assumptions to the correct registration at the given pitch, but instead let the young performer choose the right registration based on character and emotion. Saunders-Barton and Spivey says that “subtle shifts in resonance and registration are the keys to defining character and style in musical theatre” (Saunders-Barton, Spivey, 2018, p. 38). The exercises used for training this should be simple and repetitive. Exercises isolating certain muscular functions and then reintegrating them is advised to create flexibility (Saunders-Barton, Spivey, 2018, p. 38).

Kayes (2004) and Saunders-Barton, Spivey (2018) describes the Thyroarytenoid muscle’s function as shortening and thickening the vocal folds and the cricothyroid muscle as stretching and thinning them. What is referred to as “high belt” between Eb5 and Ab5 or higher is usually easier for young women to access than the passagio-notes between C5 and Eb5 where it would feel natural to transition to head voice/M2. Saunders-Barton says the trick is to “help develop optional balancing in registration so that the transitional ranges become effortless but maintain the desired colour” (Saunders-Barton, 2014).

Note that belting should never be attempted if the voice is under par and approached with caution in the pre-menstrual phase (Kayes, 2004, p. 173).

Example exercises for developing a belted sound can be found in Appendix B.

Repertoire

I am expecting my young singers to have a variety of repertoire to hand, not only for auditions, but also for training purposes. Different pedagogues and casting directors recommend various mixtures of repertoire, but Melton emphasises that a smaller repertoire folder that is “dynamite” is better than a large repertoire folder with some songs that doesn’t show you off at your best (Melton, 2003, p. 102). It is always useful to be

aware of songs to avoid. This list changes regularly, but usually involves the big showstoppers in the shows currently being produced where you are auditioning, alongside songs that are generally overdone such as On My Own from Les Misérables and Memory from Cats. However, I usually say to my students, that if they can genuinely perform a song from the “overdone” list incredibly well, they can still sing it as long as it suits their casting age and character. Young performers very often want to sing “what’s in fashion” or songs they have heard in a popular film regardless of whether it fits their voices and range. As a teacher, I spend a lot of time helping my students understand what songs actually “make them shine”! Yarnell recognises that repertoire, particularly at the time of adolescence, needs to be motivational with a subject matter that the young singer is able to portray and understand emotionally (Yarnell, 2006, p. 83).

Spivey and Saunders-Barton recommends repertoire split into four categories;

Soprano Mix, Legit Soprano, TA Speech Mix/Belt Mix and TA Dominant Repertoire (2018, p. 79 - 91).

They always recommend starting with repertoire that is consistent in range and quality to help the students coordinate registration and emphasises that adjusting keys of songs in the developmental phase is allowed and sometimes even required as range is developed (Saunders-Barton, Spivey, 2018, p. 79). Exam boards such as London College of Music also allows for keys to be altered as voices develop.

When students get slightly older, the repertoire folder should be altered even more towards auditions and casting breakdowns. My older musical theatre students preparing for professional careers (16 - 21 years old) are asked to prepare the following material for their final musical theatre exams:

1 legit ballad (legit refers to pre 1965), 1 legit uptempo, 1 contemporary ballad, 1 contemporary uptempo, 1 character/comedy song, 1 British musical theatre song, 1 pop/rock ballad, 1 pop/rock uptempo, 1 song that shows you off.

A suggestive guide to repertoire for young female singers can be found in Appendix C.

Conclusion

Previously, the general perception was that “belting” was a sole M1 and thyroarytenoid quality. This is likely to be the reason why it has been seen as a dangerous territory,

especially for young female singers with changing voices. Knowing that belting is in fact a mixed quality and resonance shift, particularly in higher pitches (Saunders-Barton, 2014) is changing this perception. Belting should still be seen as an “extreme vocal quality” and only executed in moments of heightened emotion. It is important for the young female singer to learn the difference. It might often be unnecessary to belt. Thus, belting should **only** be introduced when a developed head voice/M2 quality is in place and when a healthy speaking voice is present. It should therefore usually not be introduced to beginning singers. Cross-training young singers is highly recommended to learn how to access proper registration. As well as being aware of how the young singer’s voice is developing it is important to always cater to the singer as an individual and not just as an “adolescent”. If the young singer can “yell” with the right sensation of energy on a particular pitch, belting on this pitch is possible. We can conclude that it is then not a problem for a young female singer to belt as long as it is only done in small sections, and ideally only 10% of the vocal lesson is spent of belting technique. However, there might be times in the vocal development phase when belting should be avoided or executed with extreme caution, particularly when the voice is sounding husky or consistently breathy, also on lower pitches. The ages of thirteen to fourteen years old are usually the most critical with breathiness appearing, which must be monitored carefully, and belting may not be advisable if a breathy voice is present at this time. Belting should never be executed when the voice is under par.

Training order should be addressed when working with young voices and exercises should be fun and playful. Technical exercises are necessary and useful, but there is no need to mention anatomical language.

1. Primal Sounds such as crying, whining, hooting and yelling. Breath Management strategies should be introduced through exercises, with particular emphasis on tension release which is particularly common for young triple threat performers. Through primal sounds the singers should be able to feel engagement in the transverse abdominis, internal obliques and external obliques. It is important to remember that young changing voices may not be able to hold phrases for as long as an adult female.
2. Speech to song: Developing a strong and flexible speaking voice is crucial. Playing around with voices to understand how to access different resonances is helpful. Accent Training may be used to understand vocal placement. Standard American Accent is particularly useful for belt-training due to its natural bright, forward resonance, spread lips and teeth showing.

3. Developing a strong M2 quality. A strong CT quality must be developed before belting training should take place. A so called “head voice mix” is the ideal and repertoire should consist of legit material such as Rodgers and Hammerstein and potential light classical repertoire. Singing in different languages may be helpful to develop flexibility and access new resonances, but is not a necessity.
4. When the above is mastered, we can start playing around with a TA dominant M1 quality, then access twang and try to find a belted sound. It is helpful to bring it back to speech, especially as we try to access a so-called “belt-mix” on higher pitches. If it can’t be “yelled” in a healthy manner, it should not be belted.
5. Cross-Training. M1/TA and M2/CT qualities should always be trained side by side to ensure a balanced voice.

Repertoire for young female performers should be varied and include material accessing a range of vocal qualities. CT dominant repertoire should be practiced even if the voice, particularly in the beginning stages, sounds completely separated from the TA dominant sound. It is important that the repertoire chosen is emotionally accessible for the young singer including themes they can identify with. Light classical repertoire can with luck be introduced alongside more contemporary material, though I in the voice studio tend to use older legit musical theatre repertoire such as Gilbert and Sullivan and Novello to Rodgers and Hammerstein to train CT registration, rather than classical repertoire. Learning to belt should be fun and done through simple, repetitive and relatable exercises. Belting isn’t dangerous if it is done correctly!

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APPENDIX A - SPEECH TO SONG EXERCISES

These exercises will form the fundament for belt training. I always emphasise the importance of my students daring to sound “ugly” when accessing twang and always remembering to be energised. Play around with ranges and repeat on different pitches.

Yahoo! “Yah” in an M1 quality and “hoo” in an M2 quality, moving the resonance from forward, spread lips and teeth showing, to a backward resonance with lips covering the teeth.

Hey! Hey in an M2 speech/mix quality gradually increasing the range. Slide the spoken hey up and down and say it with different intentions, such as flirty, aggressively, disappointed and energetic! The vowels need to be closed when accessing a pitch above the second passagio.

Wohoo, let’s go! “Wohoo” in an M2 quality, “Let’s go” with a forward, twangy M1 quality.

Ey, Franco! Forward placement and an energised yell. I always do this exercise placing “Franco” at different distances and different locations such as across the street, running away, in danger, in in the library etc. as well as encouraging different emotional intentions; anger, fear, desperation, happiness etc.

Hey Taxi!, Phone Call! Same as above.

APPENDIX B - TECHNIQUE EXERCISES FOR BELTING

4 x 4 descending exercise for vocal registration

4 x 4 Ascending exercise for vocal registration

Musical notation for the second staff. It begins with a treble clef and a key signature of one flat (B-flat). The melody continues with quarter notes: G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6, D6, E6, F6, G6, A6, B6, C7, D7, E7, F7, G7, A7, B7, C8, D8, E8, F8, G8, A8, B8, C9, D9, E9, F9, G9, A9, B9, C10, D10, E10, F11, G11, A11, B11, C12, D12, E12, F13, G13, A13, B13, C14, D14, E14, F15, G15, A15, B15, C16, D16, E16, F17, G17, A17, B17, C18, D18, E18, F19, G19, A19, B19, C20, D20, E20, F21, G21, A21, B21, C22, D22, E22, F23, G23, A23, B23, C24, D24, E24, F25, G25, A25, B25, C26, D26, E26, F27, G27, A27, B27, C28, D28, E28, F29, G29, A29, B29, C30, D30, E30, F31, G31, A31, B31, C32, D32, E32, F33, G33, A33, B33, C34, D34, E34, F35, G35, A35, B35, C36, D36, E36, F37, G37, A37, B37, C38, D38, E38, F39, G39, A39, B39, C40, D40, E40, F41, G41, A41, B41, C42, D42, E42, F43, G43, A43, B43, C44, D44, E44, F45, G45, A45, B45, C46, D46, E46, F47, G47, A47, B47, C48, D48, E48, F49, G49, A49, B49, C50, D50, E50, F51, G51, A51, B51, C52, D52, E52, F53, G53, A53, B53, C54, D54, E54, F55, G55, A55, B55, C56, D56, E56, F57, G57, A57, B57, C58, D58, E58, F59, G59, A59, B59, C60, D60, E60, F61, G61, A61, B61, C62, D62, E62, F63, G63, A63, B63, C64, D64, E64, F65, G65, A65, B65, C66, D66, E66, F67, G67, A67, B67, C68, D68, E68, F69, G69, A69, B69, C70, D70, E70, F71, G71, A71, B71, C72, D72, E72, F73, G73, A73, B73, C74, D74, E74, F75, G75, A75, B75, C76, D76, E76, F77, G77, A77, B77, C78, D78, E78, F79, G79, A79, B79, C80, D80, E80, F81, G81, A81, B81, C82, D82, E82, F83, G83, A83, B83, C84, D84, E84, F85, G85, A85, B85, C86, D86, E86, F87, G87, A87, B87, C88, D88, E88, F89, G89, A89, B89, C90, D90, E90, F91, G91, A91, B91, C92, D92, E92, F93, G93, A93, B93, C94, D94, E94, F95, G95, A95, B95, C96, D96, E96, F97, G97, A97, B97, C98, D98, E98, F99, G99, A99, B99, C100, D100, E100, F101, G101, A101, B101, C102, D102, E102, F103, G103, A103, B103, C104, D104, E104, F105, G105, A105, B105, C106, D106, E106, F107, G107, A107, B107, C108, D108, E108, F109, G109, A109, B109, C110, D110, E110, F111, G111, A111, B111, C112, D112, E112, F113, G113, A113, B113, C114, D114, E114, F115, G115, A115, B115, C116, D116, E116, F117, G117, A117, B117, C118, D118, E118, F119, G119, A119, B119, C120, D120, E120, F121, G121, A121, B121, C122, D122, E122, F123, G123, A123, B123, C124, D124, E124, F125, G125, A125, B125, C126, D126, E126, F127, G127, A127, B127, C128, D128, E128, F129, G129, A129, B129, C130, D130, E130, F131, G131, A131, B131, C132, D132, E132, F133, G133, A133, B133, C134, D134, E134, F135, G135, A135, B135, C136, D136, E136, F137, G137, A137, B137, C138, D138, E138, F139, G139, A139, B139, C140, D140, E140, F141, G141, A141, B141, C142, D142, E142, F143, G143, A143, B143, C144, D144, E144, F145, G145, A145, B145, C146, D146, E146, F147, G147, A147, B147, C148, D148, E148, F149, G149, A149, B149, C150, D150, E150, F151, G151, A151, B151, C152, D152, E152, F153, G153, A153, B153, C154, D154, E154, F155, G155, A155, B155, C156, D156, E156, F157, G157, A157, B157, C158, D158, E158, F159, G159, A159, B159, C160, D160, E160, F161, G161, A161, B161, C162, D162, E162, F163, G163, A163, B163, C164, D164, E164, F165, G165, A165, B165, C166, D166, E166, F167, G167, A167, B167, C168, D168, E168, F169, G169, A169, B169, C170, D170, E170, F171, G171, A171, B171, C172, D172, E172, F173, G173, A173, B173, C174, D174, E174, F175, G175, A175, B175, C176, D176, E176, F177, G177, A177, B177, C178, D178, E178, F179, G179, A179, B179, C180, D180, E180, F181, G181, A181, B181, C182, D182, E182, F183, G183, A183, B183, C184, D184, E184, F185, G185, A185, B185, C186, D186, E186, F187, G187, A187, B187, C188, D188, E188, F189, G189, A189, B189, C190, D190, E190, F191, G191, A191, B191, C192, D192, E192, F193, G193, A193, B193, C194, D194, E194, F195, G195, A195, B195, C196, D196, E196, F197, G197, A197, B197, C198, D198, E198, F199, G199, A199, B199, C200, D200, E200, F201, G201, A201, B201, C202, D202, E202, F203, G203, A203, B203, C204, D204, E204, F205, G205, A205, B205, C206, D206, E206, F207, G207, A207, B207, C208, D208, E208, F209, G209, A209, B209, C210, D210, E210, F211, G211, A211, B211, C212, D212, E212, F213, G213, A213, B213, C214, D214, E214, F215, G215, A215, B215, C216, D216, E216, F217, G217, A217, B217, C218, D218, E218, F219, G219, A219, B219, C220, D220, E220, F221, G221, A221, B221, C222, D222, E222, F223, G223, A223, B223, C224, D224, E224, F225, G225, A225, B225, C226, D226, E226, F227, G227, A227, B227, C228, D228, E228, F229, G229, A229, B229, C230, D230, E230, F231, G231, A231, B231, C232, D232, E232, F233, G233, A233, B233, C234, D234, E234, F235, G235, A235, B235, C236, D236, E236, F237, G237, A237, B237, C238, D238, E238, F239, G239, A239, B239, C240, D240, E240, F241, G241, A241, B241, C242, D242, E242, F243, G243, A243, B243, C244, D244, E244, F245, G245, A245, B245, C246, D246, E246, F247, G247, A247, B247, C248, D248, E248, F249, G249, A249, B249, C250, D250, E250, F251, G251, A

1. Twang Sung as a bratty kid or a witch!

1. Twang Sung as a bratty kid or a witch!

The musical notation is on a single staff. It begins with a treble clef and a key signature of one flat (B-flat). The melody consists of eighth and quarter notes, with a final half note. The lyrics 'Nay nay nay nay nay nay nay nay.' are written below the first measure. The notation continues with a double bar line, a key signature change to two flats (B-flat and E-flat), and then continues with eighth and quarter notes. The lyrics 'Nay nay nay nay nay nay nay nay' are written below the second measure. The notation ends with a double bar line and a final chord. The number '12' is written above the final chord.

Nay nay nay nay nay nay nay nay.

Nay nay nay nay nay nay nay nay

2. Twang/Speech (Mix Belt) Descending *American* Accent

2. **Twang/Speech (Mix Belt)** Descending American Accent

The musical notation shows five measures of music on a single staff. Each measure contains the lyrics 'That darn cat!'. The melody is a descending line, starting on a high note and moving down stepwise. The key signature changes from one sharp (F#) to one flat (Bb) and back to one sharp (F#). The tempo is marked '16'.

3. Twang/Speech (Mix Belt)

3. Twang/Speech (Mix Bar)

20 24

Ta-xi! Ta xi! Ta xi! Ta xi! Ta xi! Ta xi! Ta xi! Ta xi!

4. Twang/Speech (Mix Belt) ₂₈

28

Hey Ta - xi! Hey Ta - xi! Hey Ta - xi! Hey Ta - xi!

32

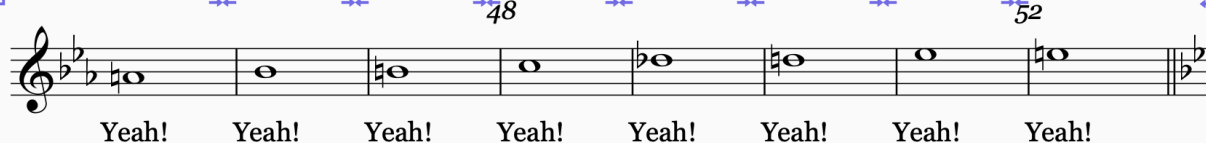
Hey Ta-xi! Hey Ta-xi! Hey Ta-xi! Hey Ta-xi!

2

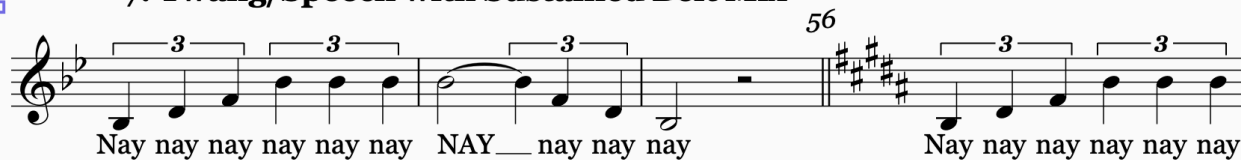
5. Twang/Speech (Mix Belt) Full Start Variations include Mee, Geh, Gay



6. Sustained Belt



7. Twang/Speech with Sustained Belt Mix



APPENDIX C - REPERTOIRE SUGGESTIONS FOR YOUNG FEMALE PERFORMERS

A mix of repertoire used in my own voice studio and sources from Saunders-Barton & Spivey (2018) and Michael-Jones (2020).

TA-Speech Mix/Belt Mix Repertoire suggestions for Young Beginner “Belters”

Asheville	Bright Star	Martin/Brickell
Better	Little Women	Dickstein/Howland
Everlasting	Tuck Everlasting	Miller/Tysen
Good Morning Baltimore	Hairspray	Shaiman
Hopelessly Devoted to you	Grease	Jacobs/Casey
I can hear the bells	Hairspray	Jacobs/Casey
I have a dream	Mamma Mia	Andersson/Ulvaeus
Journey to the past	Anastasia	Flaherty/Ahrens
Killer Instinct	Bring It On	Manuel-Miranda
Nothing	A Chorus Line	Hamlisch
Not for the life of me	Thoroughly Modern Millie	Gesner/Lippa
Out here on my own	Fame	Gore
Part of your world	The Little Mermaid	Menken
Times are hard for dreamers	Amelie	Messe/Tysen
Trolley Song	Meet me in St. Louis	Martin/Blane

TA-Speech Mix/Belt Mix Repertoire suggestions for Young Developing “Belters”

A Trip to Library	She loves Me	Bock/Bock
Just around the riverbend	Pochahontas	Menken
Look what happened to Mabel	Mack and Mabel	Herman
On my way	Violet	Tesori/Crawley
Simple Joys	Pippin	Schwartz
Six hours as a princess	Children’s Letters to God	Cohen/Evans

Someday	The Wedding Singer	Beguelin/Sklar
Spark of Creation	Children of Eden	Stephen Schwartz
Superboy and The Invisible Girl	Next to Normal	Kitt
Top Secret Personal Beeswax	Junie B. Jones	Heisler/Goldrich
The Lamest Place in the world	Thirteen	Jason Robert Brown
The Life I never Led	Sister Act	Menken/Slater
Wait a bit	Just So	Stiles/Drewe
What it means to be a friend	Thirteen	Robert Brown

TA-Speech Mix/Belt Mix Repertoire suggestions for Young More Advanced “Belters”

Almost There	Princess and The Frog	Newman
Astonishing	Little Women	Dickstein/Howland
Dead Mom	Beetlejuice	Brown/King
Dyin’ Ain’t so bad	Bonnie and Clyde	Black/Wildhorn
Fly Fly Away	Catch me if you can	Shaiman/Wittman
Gimme Gimme!	Thoroughly Modern Millie	Tesori/Scanlan
Home	The Wiz	Smalls
I’m not	Little by Little	Ross
I’m not afraid of anything	Songs for a new world	Robert Brown
Just because I’m a girl	Goldilocks and the Three bears	Stiles/Drewe
Pulled	The Addams Family	Lippa/Brickman
Screw Loose	Cry Baby	Javerbaum/Schlesinger
Square Root of Possible	Jingle Jangle	Diskint, Lawrence, Nathan
The Wizard and I	Wicked	Stephen Schwartz
Times like this	Lucky Stiff	Ahrens/Flaherty
Waiting for Life	Once on this Island	Ahrens/Flaherty
Watch what happens	Newsies	Menken/Feldman