SINGING TEACHERS AND THE

DEVELOPMENT OF YOUNG VOICES

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Statement of Authentication

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

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Abbreviations

ANATS   Australian National Association of Teachers of Singing

VFT   Visual Feedback Technology

Abstract

The method of teaching singing has long been based on the master-apprentice model and oral tradition. Historically, teachers applied methods sourced from their own learning experience, and the focus was primarily on producing beautiful sound. More recently, with the introduction of scientific advancements and an acknowledgment of the stages in adolescent vocal development, the role of the singing teacher is becoming increasing more multifaceted and holistic. The aim of this explorative study was to investigate the singing teacher's role in the development of young voices. To guide this inquiry, a structured interview of nine singing teachers was conducted, in which the participants responded to questions pertaining to their teaching methods, feedback methods, pedagogical orientation and teacher-student relationships. The results highlighted three key influences of the singing teacher on the development of young voices. These included the need for adaptation in response to the individual, creating an individual learner through the use of student-led and technological feedback, and establishing a safe learning environment. The outcomes achieved from this research have teaching implications not only for the private singing teacher in regard to enhanced teaching methods, but may also extend to the primary and secondary school sector in the delivery of vocal programs within the classroom setting. Additional benefits include improved professional development courses for teachers, pre-service education students, as well as pedagogical content in tertiary courses. Future research stemming from this study could include a more in-depth analysis of the term vocal development, or an investigation into the teaching methods utilised by online singing teachers.

CHAPTER 1: INTRODUCTION

Background of the Study

There is significant research on singing instruction, vocal pedagogy and vocal development. Research has been conducted into the methods of singing instruction, however, in Australia, this has largely been concentrated on the school setting (Hughes, 2007; Wicks, 2014). The effects of singing instruction, including gesturing (Nafisi, 2010), modelling (Liao, 2008; Liao & Davison, 2016), and imagery (Clements, 2008) have also been well documented, however these studies concentrate on specific teaching methods. Research into the practical application and efficacy of the adolescent vocal development models by Cooksey (2000b) and Gackle (1991) have also been conducted (Caldretti, 2017; Decoster, Ghesquiere & Van Steenberge, 2008; Willis & Kenny, 2011). Furthermore, research into the one-to-one teaching practices of the private singing teacher has primarily focused on the tertiary setting (Carey & Grant, 2015). Therefore, a review of the literature reveals that although there is a plethora of research into singing instruction and vocal development, there is limited research into the roles, responsibilities and teaching practices applied by the private singing teacher during a vocal lesson, and how this influences the development of young voices.

In response to increased research on young vocal development, and a greater emphasis on voice science, this study seeks to identify the singing teacher's role in the development of young voices. This is timely, as the landscape of teaching singing has significantly changed over the past century, largely due to increased research and emphasis on voice science. The traditional 'bel canto' approach that focused on 'what' sound was produced (Callaghan, 1998), has instead been replaced with the need to understand 'how' sound is produced. Furthermore, the lens of vocal development has expanded from the technical, to encompass the development of both the body and mind (Thurman & Welch, 2000a). Unlike traditional ideologies, the current definition of vocal development acknowledges that the voice is intrinsically linked to the whole body, and that, "anything that threatens the physical, mental, or emotional well-being is a threat to the voice" (Callaghan, 2014, p. 165). It also identifies development is a continual process in which each individual's developmental path is unique (Welch, 2015, p. 444).

However, it is the increased research on the development of young voices, including the study of children, adolescents, and young adults, which has provided the greatest potential emphasis for change for the singing teacher. Indeed, teaching young voices presents a number of unique challenges to the singing teacher, not present when instructing adults.

The first challenge is the constant fluctuation and growth of the vocal anatomy. Kahane (1982) highlights that from birth to the age of 21, the vocal anatomy is constantly growing, with the most significant changes evident in the larynx and the vocal folds (Trollinger, 2007). According to Cooksey and Welch (1998), the most prominent of these anatomical changes occur during the prepubescent period (p.102). Therefore, the second challenge presented to the singing teacher occurs when teaching a student undergoing adolescent voice change. Cookey's male adolescent voice change model (2000b) identifies a range of vocal limitations associated with various stages of the voice change process, which typically occurs between the ages of 10 to 21 years. These include loss of vocal flexibility, increased breathiness, register 'breaks' and vocal instability (Cooksey, 2000b, pp. 833-840). Likewise, Gackle (1991) identifies similar limitations to the female adolescent voice when proceeding through the voice change process, which typically occurs between the ages of 8 to 15 (pp. 22-23). In addition to the physical changes, hormonal changes experienced by the young student provide a further challenge to the singing teacher in regard to motivation, confidence and self-esteem. Extensive research has confirmed the correlation between a positive self-identity and the continuation of singing in both male and female students (Gackle, 2006; Greenstein, 2012; Harrison, 2006; McRoy, 2011).

The final challenge focuses on the ethical considerations required when teaching a young student. Although, research emphasises the importance of friendship, respect and trust as key components of the teacher-student relationship (Brand, 2016; Harrison, 2004; O'Bryan, 2010; Yang, 2002), special consideration into the ethical boundaries of working with children must always be at the forefront (Sell, 2005). Further considerations must also be given to the use of technological feedback methods (video and audio).

Research Aims and Significance

This research aims to fill a current gap in the literature on the identification of the current teaching practices and methods utilised by the private singing teacher in the one-on-one teaching situation. This research aims to explore the methods being used in the private singing studio that are specifically targeted toward improving the development of young voices. It

also aims to identify the singing teacher's knowledge of the concept of vocal development, and the singing teacher's role in the development of young voices.

This research has implications not only for the private singing teacher, but may also extend to the primary and secondary school sector in the delivery of vocal programs within the classroom setting. Additional benefits include the potential for improved professional development courses for teachers, pre-service education students, as well as pedagogical content for tertiary courses.

Research Questions

The basis of this research investigates the primary research question – What is the singing teacher's role in the development of young voices? However, in order to address this, a number of subset questions were devised, and include:

1. What factors influence the development of young voices?
2. How do these factors influence the role of the singing teacher in regard to the development of young voices?
3. How important is the role of the singing teacher in the development of young voices?

Limitations of the Study

A number of limitations are acknowledged in this study. The first limitation was the time constraints imposed by the Master of Research format. The thesis component of the Master of Research is a second-year project lasting eight months. The project began in February 2017 and was completed in September 2017. This restrictive timeframe posed a number of challenges. The second relates to the participant sample. Given the limited timeframe, the participant sample was restricted to private studio singing teachers in the physical space (i.e. excluding online singing teachers). In addition, recruitment of the participants was limited to the area of New South Wales. However, the use of telephone and FaceTime methods for the interview administration allowed the researcher to interview participants outside the Sydney metropolitan area.

Glossary of Terms

Participant	A singing teacher who participated in the research interview
Singing teacher	A person who teaches singing on a one-to-one basis
Tessitura	Comfortable pitch range
Vocal development	A continual process in which the student is constantly moving from a 'less skilled singer' to a 'more skilled singer'
Voice science	Scientific knowledge of the vocal anatomy and physiology
Young voices	Includes child, adolescent, and young adult voices between the ages of 8 to 21

Thesis Outline

This thesis is divided into six chapters. This chapter provided a background to the study, as well as defining the purpose, aims, significance and limitations of the study. Chapter 2 expands the concept of vocal development through a review of the literature. It focuses on the vocal anatomy, adolescent vocal development, and identifies the intrinsic influences on vocal development including teaching methods, feedback methods, the quality of the teacher-student relationship, and pedagogical orientation. The third chapter outlines the methods in which this study was conducted. It includes information on the theoretical framework, participant selection and recruitment, data collection methods including the interview schedule and administration, methods for data analysis, justification for the research design and ethical considerations. The fourth chapter presents the findings of the interviews. Chapter 5 discusses the emergent themes arising from the findings. The final chapter includes responses to the research questions, recommendations, and concluding comments.

CHAPTER 2: LITERATURE REVIEW

Introduction

The literature review focuses on the three broad areas of vocal development, young voices and vocal pedagogy. The first section examines vocal development in terms of the models used to map vocal behaviour and ability. It also explores the concept of vocal development as a lifelong process. The second section focuses on young voices, examines the effects of age on vocal anatomy formation, and explores the subsequent challenges this presents to the singing teacher. Young voices in relation to male and female adolescent voice change theories are also examined in this section. The final section of the literature review focuses on the role of vocal pedagogy on the developmental process. The positive and negative influence of teaching strategies, feedback methods and teacher–student relationship are examined.

Section 1: Vocal development

The skill of learning to sing is a lifelong process (Welch, 2006). Seven phases of vocal development across the lifetime have been identified, and include early childhood [0-3 years], later childhood [3-10 years], puberty [8-14 years], adolescence [12-16 years], early adulthood [15-30/40 years], older adulthood [40-60 years] and senescence [60-80+ years] (Welch, 2003, p. 179). According to Welch (2006), the singing process begins pre-birth, with the sound of the mother's voice instrumental during this stage (p. 257). In addition, Thurman and Gramsch (2000) discuss the increased vocalised complexity that continues throughout the first 18 months of life, as infants transition from cooing, to babbling, to speaking one word. Research (e.g., Rutkowski, 1996, 2013; Welch et.al, 1996) has also shown that the development of the singing voice in later childhood follows a predetermined sequence, in which certain singing behaviours take precedence over others. Two significant models provide a map for this progression, and include Rutkowski's Singing Voice Development Measure (1996), and Welch's Vocal Pitch Matching Development Model (2000). Rutkowski's model (Appendix A, see Figure 2.1, p. 76) consists of nine steps, and suggests that children progress from speech-like chanting of the song text, to singing within a limited range, to finally demonstrating an expanded vocal pitch range.

Similarly, Welch's model (2000) identifies four stages of pitch matching development (Appendix A, see Figure 2.2, p. 76). The first of these stages recognises that words take central interest over the melody. Stage 2 leads to increased pitch awareness and control, while Stage 3 exhibits increased accuracy in melodic shape and intervals. The final stage concludes with the child achieving almost complete melodic and pitch accuracy.

However, even though these models map a sequential progression of singing competency, the developmental path of singing skills are, "not necessarily linear for any particular individual" (Welch, 2015, p. 444). Indeed, Welch (2000) suggests singing skills are learned in a, "continuum of developmental behaviour patterns" (p. 706). For ease of explanation, Welch's continuum can be likened to a game of snakes and ladders. One end of this analogy is marked with 'less skilled singing ability' while the other end is marked 'more skilled singing ability'. Each level within the analogy can be seen as a step taken by the "developing singer" (Welch, 2000, p. 712). The starting point is different for each individual depending, on his/her current and previous experience (Welch, 1986, p. 297). An individual's vocal development can move up or down the continuum depending on their interaction, either positively or negatively, to a range of intrinsic and extrinsic influences. These include age, gender, maturation stage, vocal physiology, previous vocal experiences, the musical task offered, the quality of feedback available, expectation of peers and the richness of the individuals musical environment (Welch, 2000, p. 704).

The literature therefore reveals that vocal development begins before birth and continues throughout our lifetime. Models by Rutkowski and Welch articulate a sequential path of development from the spoken to the singing voice, especially in early childhood. However, research indicates that an individual's singing ability is not fixed, but is continuously fluid. Indeed, every individual's developmental path is unique and dependent on a range of intrinsic and extrinsic influences that can either perpetuate or hinder future development. This presents a challenge to the singing teacher, as they need to be constantly aware of a student's position on the continuum in order to provide appropriate learning strategies that enhance vocal development.

Section 2: Young voices

The literature also reveals that vocal development is influenced by a number of different factors. One such factor is age, and the subsequent effect on anatomical development, which will be discussed further in the following section.

Anatomy and vocal development

Trollinger (2007) highlights that the period between infancy and adulthood marks a significant change to the overall structure of the vocal anatomy. The two most notable changes occur in the larynx to both the laryngeal cartilage and vocal folds (Kahane, 1982). According to Thurman and Klitzke (2000b, p. 696), rates of growth differ significantly between males and females during the pubescent period, which for females generally extends from the age of 10 to 16 years, and for males, on average, between the ages of 12 to 18 years.

Laryngeal cartilage

The larynx is situated at the top of the trachea and extends from the nose and lips to the bronchioles in the lungs (Miller, 1996, p. 242). Nair (2007) identifies that the anatomy of the larynx consists of a network of three cartilage including the cricoid, thyroid and arytenoid cartilages, as well as muscles and connective tissue (p. 63). Furthermore, Callaghan (2014, p. 53) notes that the larynx is the source of vocal phonation and sound creation.

In prepubescent children, the larynx is positioned higher in the neck (Trolliger, 2007, p. 20), and is much shorter and smaller (Morris, 2017a). In addition, the laryngeal cartilage is much smaller, rounded, compact, softer, and more pliable than adults (Thurman & Klitzke, 2000b, p. 699). However, during adolescence, Reilly (1997, p. 127) notes that the laryngeal framework descends from C3 to C7, and the pharynx changes from a conical to more cylindrical shape. In addition, the laryngeal cartilages grow in height, width and length during puberty, with males experiencing two to three times more growth than females (Kahane, 1982, p. 450). One of the most significant differences between males and females during this period is the anteroposterior growth in the male thyroid cartilage which is three times greater than females (Thurman & Klitzke, 2000b, p. 700).

Vocal folds

True vocal folds are positioned on the left and right side of the larynx (Nair, 2007, p. 65), and consist of three layers including, "the surface epithelial layer followed by a trilaminar lamina propria structure (superficial lamina propria [SLP], middle lamina propria [MLP], and deep layer of the lamina propria [DLP], and the vocalis muscle" (Hartnick, Rehbar and Prasad, 2005, p. 6). During puberty the vocal folds lengthen, with males experiencing a growth of 11.57mm compared to 4.16mm in females (Kahane, 1982, p. 25). Titze (1994) suggests that this process of lengthening during adolescence may affect the vibratory capacity of the vocal folds leading to, "a compromise in pitch clarity and register clarity" (p. 182). In addition, Hirano (1988) notes that correct vocal use and hygiene is essential to the health and efficient functioning of the vocal folds stating, "the superficial lamina propria is pliable and an essential component of the singing voice. If this layer of a singer becomes partly or entirely stiff, he or she may lose professional sound" (p. 52). Indeed, research by D'Alatri, Petrelli, Calo, Picciotti, Marchese and Butto (2015) highlight the prevalence of vocal disorders, stating that up to 78% of school age children assessed for chronic hoarseness have vocal fold nodules associated with chronic vocal abuse from various factors including singing (p. 287).

Voice science

In light of the above, Thurman and Welch (2000b) state that it is imperative that the singing teacher base their teaching practices on a, "scientific foundation" (p. 303). Callaghan (2014) reiterates, stating, "in order to teach vocal technique effectively, it is necessary to understand how the voice works" (p. 168).

The pedagogical approach, commonly described as voice science, was pioneered by the Spanish singer Manual Garcia in the mid-nineteenth century through the invention of the laryngoscope (Callaghan, 2014; Wicks, 2014). Voice science encompasses scientific knowledge of the vocal anatomy and physiology, and its effects on breath management, phonation, resonance and articulation, registration and vocal health, and is the result of research in physiology, medicine, speech, pathology, acoustics, linguistics, education, psychology and neurology (Callaghan, 2014, p. x).

Indeed, there have been numerous contributors and supporters of voice science and its application to singing instruction (e.g., Callaghan, 2000, 2014; Nair, 2007; Sundberg, 1987; Thurman & Welch, 2000a; Ware, 1998). Benefits of this pedagogical approach on the development of young voices are extensive. As Callaghan (2014) writes, these include the

provision for more consistent results than traditional pedagogical approaches, allowing teachers to adapt to a wider range of singing styles and student needs, providing a more consistent approach to the diagnosis and correction of technical problems, and assisting in the provision of improved communication between teachers and students through the use of standardised terminology (p. 172). However, some researchers also have expressed concerns about the place of voice science in the 'art' of singing (Sell, 2005), with fears of unduly overloading a young student with too much unnecessary information (Collyer, 2010; Nisbet, 2010).

Teaching implications

The literature reveals that the vocal anatomy of children and adolescents is in a constant state of change and evolution. This knowledge has various implications for the singing teacher. As noted, each change in vocal structure is accompanied by its own set of vocal limitations. Therefore, this raises the assumption that to teach effectively, a teacher must have an understanding of how the voice works (Callaghan, 2014, p.168) in order to create authentic learning opportunities for the student (Denison, 2012, p. 346). Trollinger (2007) notes a number of teaching strategies that cater to the paediatric voice. These include providing repertoire within a vocal range of approximately C4 – E5, avoiding dynamic extremes, avoiding pieces with long sustained phrases, as well as encouraging the use of *acappella* singing and the speech-singing voice (pp. 20-22).

Significant differences

The literature reveals that there are significant differences in the vocal anatomy between childhood, puberty and adulthood, with the laryngeal cartilage and vocal folds experiencing the greatest change. Knowledge of such changes challenges the singing teacher to understand the capabilities and limitations of paediatric voice production, and implement strategies that support and nurture the developing voice.

The literature also revealed that significant physical differences occurred between male and females during the pubescent period. Such change in the vocal anatomy directly influences the vocal production capabilities of the singing student in relation to vocal range, timbre and quality. Such gender differences have led to the formulation of adolescent vocal development models, which are discussed in the next section.

Adolescent vocal development

The literature identifies that changes to the vocal anatomy are at their greatest during the pubescent period. As noted above, there is an implication that it is the responsibility of the teacher to be informed of these changes and adapt their methodology accordingly. To aid in this, Cooksey (2000b) and Gackle (1991, 2000b) devised models to map the stages of male and female vocal development. These models provide the teacher with an invaluable guideline for identifying the age and vocal characteristics associated with each stage, and are discussed below.

Male adolescent voice change

For more than half a century, male adolescent vocal development has attracted much interest in research. Over this time, numerous theoretical contributions have been formulated in regard to modified teaching strategies for males undergoing voice change. The most prominent of these include McKenzie's 'Alto-Tenor Plan' (McKenzie, 1956), and Coopers 'Cambiata Concept' (Stockton, 2015). However, "one of the most influential theorists for our current understanding of male voice change is John Cooksey" (Fisher, 2009, p. 45). Influenced by the research of Naidr, Zobril and Sevcik (1965) and Frank and Sparber (1970) which used respective longitudinal studies to identify distinct 'stages' in male voice change (Denison, 2015, p. 23), Cooksey's Contemporary Eclectic Theory identified a, "universal process of voice change that occurred in an invariant sequence of six stages but at different times and different rates for different boys" (Willis & Kenny, 2008, p. 452). The criteria of total pitch range, tessitura (comfortable pitch range), voice quality, register development and average fundamental frequency of speech samples were used to define the comprehensive classification guidelines (Cooksey, 2000a, p. 722). A summary of Cooksey's stages is outlined in Table 2.1.

Cooksey classifies the initial stage of the unchanged male voice as the 'Premutational' period, as the 'growth spurt' has not begun. Usually occurring between ten to twelve years of age, the boy's voice quality is described as, "a rich, full quality…soprano quality" (Cooksey, 1977, p. 12). 'Early Mutation' is Stage I, occurring usually between the ages of 12 and 13. This stage heralds the initial period of puberty in which hormone secretions initiate changes within the body, including increased weight and height, a lengthening and thickening of the vocal chords, and development of the cartilage structure and muscles (Cooksey, 2000b, p. 835). During Stage II and III, the male adolescent experiences the height of the pubertal period. Typically occurring between 13 to 14 years of age, the body undergoes its most significant

sexual development as well as continued increases in height, weight, and lung capacity (Cooksey, 2000b, p. 835). In relation to the singing voice, Cooksey & Welch (1998) describe these two stages as the "high point" (p. 106) and "pivotal" (p. 107). Concluding the "most dramatic stage of pubertal development" (Cooksey, 1977, p. 14) is the 'Postmutational' period in which the 'Newvoice' begins to emerge. It is in Stage IV that the pitch range becomes more stable and the voice quality becomes clearer (Cooksey & Welch, 1998, p. 107). Development concludes with Stage V, in which the, "body and resonance of the tone increases and characteristic adult qualities emerge" (Cooksey, 1977, p. 14).

STAGE	VOICE CLASSIFICATION	AGE (estimate)	CHARACTERISTICS
Pre-Stage I (Premutation)	Unchanged	10-11	• Voice quality is thin and light and at optimum beauty during this stage • Pitch range is at maximum • Very flexible and agile
I (Early Mutation)	Midvoice I	12-13	• Higher pitches more difficult to produce • Decrease in richness of tone • Increased breathiness • Loss of agility in the upper range
II (High Mutation)	Midvoice II	13-14	• Lower pitches appear and the higher ones gradually become more unstable • Falsetto register and whistle registers emerge • Voice quality is 'huskier' and less resonant • Decrease in agility
III (Mutation Climax)	Midvoice IIA	13-14	• Voice quality is thicker and huskier when compared to Midvoice II • Voice 'cracking' more frequent • Susceptible to inflammation due to inefficient use or straining • Extreme instability in the upper register • Transition to falsetto can be abrupt • Tessitura range remains the same as Midvoice II • Loss in agility due to thickening of the vocal folds
IV (Postmutation Stabilization)	New Baritone	13-15	• Limited vibrato • Vocal pitch range stabilises • Falsetto register produced more easily • Increased consistency in the upper and lower registers • Lack of agility compared to adult expectations
V (Postmutation Development)	Settling Baritone	14-21	• Voice quality becomes clearer • Adult-like characteristics still not apparent • Gradual expansion of range • Increased dynamic and agility capabilities • Falsetto register clear and 'focused'

Table 2.1: Summary of stages of development in the male adolescent voice (Cooksey & Welch, 1998; Cooksey, 2000b)

Female adolescent voice change

Minimal information exists about the female changing voice in comparison to their male counterparts (Gackle, 1991). One explanation for this lack of research can be attributed to the acknowledgement that, "the female voice goes through various physical changes during adolescence, although these changes are not nearly as dramatic as those observed in the male" (Gackle, 1991, p. 18). In addition to the female vocal anatomy changes outlined in the previous section, subsequent observable physical changes occur from the age of approximately 10 years of age (Gackle, 1991) and include, "overall growth in physical growth, skeletal and muscular development, appearance of secondary molars, growth of pubic and axillary hair, breast development and the onset of menarche" (Gackle, 2000a, p. 739). At the forefront of female adolescent voice change research, Gackle's model suggests four phases (Gackle, 2006) of female voice development, and is summarised in Table 2.2.

PHASE	VOICE CLASSIFICATION	AGE (estimate)	CHARACTERISTICS
I	Prepubertal	8-10	• No apparent register breaks • Voice is light and 'flute-like' • Voice is flexible
IIA	Pubescence/ Pre-menarchial	11-12	• Increased breathiness • Singing can feel 'difficult' • Difficulty in achieving desired volume (especially in middle and upper range) • Register transition apparent between G4 and B4
IIB	Puberty/ Post-menarchial	13-14	• Tessitura can move up or down or narrow at either end • Register transitions apparent between G4-B4 and D5-F#5 • Vocalisation can be difficult and at times uncomfortable • Breathiness and lack of clarity in tone • Hoarseness without upper respiratory infection • Often, voice quality is richer in the lower register with an abrupt 'flip' into breathy, lighter quality
III	Young adult female/ Post-menarchial	14-15	• Overall increase in pitch and volume capabilities • Decrease in breathiness • Greater consistency between the upper and lower registers • Register transitions more apparent between D5-F#5 • Vocal agility increases • Vibrato appears • Greater ease in singing

Table 2.2: Summary of phases of development in the female adolescent voice (Gackle,1991; Gackle, 2000b)

Typically starting from the age of eight, Phase I is characterised by the "prepubertal" (Gackle, 1991, p. 22) voice which is flute-like in quality, and is flexible with no apparent register breaks. Breathiness in tone, register breaks between G4 and B4, difficulty or discomfort when singing, and lack of volume are characteristics of the "Pubescence/Pre-Menarcheal" (Gackle, 1991, p. 22) voice, which occurs in Phase IIA between 11 and 12 years of age. Huff-Gackle (1985) also highlights that these characteristics are symptomatic of, "a triangular gap between the arytenoids" (p.15), referred to as the "mutational chink" (Vennard, 1967, p. 63). Peak mutation occurs in Phase IIB in which the "Puberty/Post-Menarcheal" (Gackle, 2000b, p. 818) voice experiences hoarseness, voice cracking, difficulty or discomfort and register breaks. Phase III heralds a return to stability with the "Young adult female/Post-Menarcheal" (Gackle, 2000b, p. 818) voice gaining increased stability in tone, volume, resonance and agility, reduced breathiness, and overall improved richness and timbre.

Application of the models

Since their formulation, a number of studies have been conducted to test the parameters proposed in both models. Between 1977 and 1980, Cooksey, Beckett and Wiseman (2000) conducted a longitudinal study to test the criterion proposed by the Cooksey model. The results concluded that the model provided a reliable guideline for determining vocal characteristics including changes in range, tessitura and vocal quality (Cooksey, 2000a, pp. 725-730). More recently, the research of Willis and Kenny (2008) tested the phonational gaps specified in Cooksey's model with the aim of assessing the pattern and pace of vocal change in adolescent males, identifying where phonational gaps occur in the vocal range, and assessing the correlation between phonational gaps and weight gain. The results concluded that weight gain and phonational gaps were correlated. Likewise, Decoster, Ghesquiere and Van Steenberge (2008) concluded that Gackle's model was greatly applicable in describing the vocal abilities of 17 girls. However, all of the above studies noted that chronological age was not a valid or reliable criteria for predicting vocal-physiological stages of maturation (Cooksey, 2000a, p. 725-730). In support, Welch (2015) reiterates, "age is a poor predictor for establishing voice change stages, with any given age group likely to encompass several stages" (p. 453).

Teaching implications

Given the sometimes rapid and significant alterations in the vocal anatomy during the pubescent period, especially for males, teachers must again adapt their teaching strategies to ease the student through this period of transition. Cooksey & Welch (1998) suggest one core

strategy is to educate boys about what is happening to their voice during voice change (p. 116). A greater understanding of these changes increases a boy's motivation and self-esteem (Cooksey, 2000b, p. 830). Young (2009) reiterates, stating boys need to, "understand the basics of why it is suddenly hard to sing in tune, and must be armed with the knowledge about how their voices are developing so they have the courage to keep singing" (p. 72).

The literature reveals that vocal development is directly impacted by the structural vocal anatomy changes that occur during the pubescent period in both male and female adolescents. Fluctuations to vocal range, decreased vocal stability, apparent register breaks and variable vocal quality, were all identified symptoms experienced by both genders. The vocal development guidelines by Cooksey and Gackle highlight the correlation between physiological changes instigated by puberty, and unpredictable vocal production. These guidelines offer assistance to the singing teacher in identifying the characteristics of vocal production in association with each stage, thus assisting with the adaption of teaching methods to safely guide the student through this period.

Section 3: Vocal Pedagogy

A review of the literature identifies four main pedagogical factors influencing the development of young voices. These include teaching strategies, feedback methods, the nature of the teacher-student relationship, and pedagogical orientation.

Teaching strategies

Welch (2000) identifies that teaching strategies have a significant influence on the degree of vocal development in young students (p. 713). Such methods include the selection and implementation of vocal exercises, and the selection of appropriate repertoire, both of which will be discussed below.

Vocal exercises

In many ways, the singer is like a vocal athlete. Muscles need to be literally 'warmed up' through increased blood supply, by gradual lengthening and stretching (Sell, 2003, p. 174). As with athletes, the most appropriate way to instigate this process is through vocal exercises. The literature offers a number of different approaches to the warmup process. Miller (1996) suggests that vocal exercises should follow a set sequence, beginning with gentle onset and offset exercises, humming, flexible tongue and jaw action exercises, agility, and concluding with register blending and extension exercises (Callaghan, 2014, p. 124).

Conversely, Thurman, Theimer, Klitzke, Grefsheim and Feit (2000b) suggest that the warmup process should be applied in four steps:

> "(1) begin with about 5 to 7 minutes of sound and pitch patterns that proceed from minimal to moderate strenuousness, (2) continue with music that is moderately strenuous and proceeds to fairly strong strenuousness, then (3) sing a few quite strenuous pitch patterns, and finally (4) sing music that includes some quite strenuous patterns." (p. 790)

The literature reveals many benefits to the singer's vocal development through the use of vocal exercises. Thurman et al. (2000b) highlight that the repetitive nature of warmups is crucial for building the neural pathways required for efficient vocal co-ordinations and refining skill development (p. 786). Callaghan (2000) notes that vocal exercises deliver improved vocal efficiency through increased coordination of the vocal folds for onset, register blending, pitch and dynamic control and breath management (p. 103). Glover (2001) discusses that smooth register transitions and improved vocal technique, "to the mastery of legato, staccato, control of dynamics, rapid figurations, and learning to sing wide intervals" are other core benefits (p. 17). Creating a 'habit' of routine also results in the, "faster acquisition and stabilization of an ability" (Thurman, 2000b, p. 220), as well as laying the foundations for increased vocal hygiene habits as the singer learns how to use the voice correctly (Sell, 2003, p. 84). According to Apfelstadt (2016), vocal exercises can also be an effective way of linking vocal technique to the repertoire being studied, resulting in an increased transference of skills (p. 35).

Increased perceptual awareness of the voice leading to improved motivation is yet another identified benefit. Results in study by DeRosa (2013) concluded that perceived quality of the voice was enhanced through the performance of regular vocal exercises (p. 34). However, the study by McRoy (2011) indicated that female adolescents experience decreased motivation and a sense of disengagement through the warmup process (p. 136). Such a contrast in results further highlights the need for singing teachers to adapt exercises to the age and stage of the student.

Similar to warmups, Caldwell (2001) notes that the inclusion of vocal cooldowns at the conclusion of the lesson, "returns the voice from the extremes of the singing range to a comfortable speaking range, and helps return the larynx to a state of more relaxed functioning" (p. 35). However, while studies (Gottliebson, 2011; Ragan, 2016) have confirmed the correlation between the cooldown routine and perceived vocal functioning improvement, cooldowns still remain a neglected element in the vocal lesson. The results

from a study by Donahue, Leborgne, Brehm, & Weinrich (2014) supports this statement, revealing that while 97% of participants regularly performed warmups, only 16% performed cooldowns at the end of their practice session (p. 319).

Repertoire

The literature points to a number of considerations that should be acknowledged by the teacher when choosing repertoire for a student. Welch (2006, p. 259) highlights that achieving a match between the vocal task and the current vocal capability of the individual is pivotal to the achievement of positive movement along the continuum. Most importantly, a misalignment between appropriate repertoire and the individual's capabilities can result in the presentation of a "(dis)ability" in singing (Welch, 2000, p. 706). The three-year longitudinal study of early school age children by Welch, Sergeant and White (1995) supports the relationship between vocal development and the nature of the vocal task given to the student.

Gackle (2000b) highlights that text should be "one of the highest priorities" (p. 819). For both males and females, there is a general consensus that the text of the song should be meaningful and relevant to the interest of the student – to a degree. As Sell (2005) notes, the preferred repertoire of adolescent students in particular, is usually influenced by what they have heard on the radio or YouTube. Indeed, the supply of commercial pop repertoire requires special consideration by the teacher. Chandler (2010) notes that at times, 'pop' music requires the singer to, "take a heavy vocal setting above the main passagio" (p. 39). Often referred to as belting, this technique is questionable for paediatric voices given the high amount of tension placed on the laryngeal muscles which are in variable stages of development during this period (Tucker, 2009, p. 17).

Leading from this, the age of the student should also be considered. Although Welch (2000) highlights that there is an, "assumption that many children are developing and improving their vocal pitch accuracy as they get older" (p, 710), Sell (2003) cautions that one should not assume that because a student is older they have an improved vocal development (p. 90). As highlighted above, the paediatric vocal anatomy is in a constant state of flux and instability, and Daughtrey (2010, p. 579) highlights that special consideration should be given to the physiological capability of the young student when choosing repertoire. Selection of repertoire in an appropriate key is also another important consideration, especially for young males and females undergoing voice change. Cooksey (2000b) highlights that choosing a suitable key, based on the individual student's current tessitura and phase of vocal development ensures that that the repertoire is achievable (p. 833).

Feedback methods

Feedback is an essential ingredient for the vocal development of singers (Callaghan, 2014; Langness, 2000), as it enables the learner to, "make sense of the vocal task and their responses to it" (Welch, 2000, p. 715). According to Welch (2000), in order for feedback to be effective, it must be both meaningful and non-threatening to the student (p. 711). Furthermore, feedback may come from either internal or external sources. External sources include teachers, audiences or peers, while internal feedback includes visual, auditory and kinaesthetic sources (Callaghan, 2010, p. 22).

Verbal feedback

The literature reveals a number of important considerations for the singing teacher when delivering verbal feedback. The first centres on the language being used.
Welch (2000) notes that for the outcomes of feedback to be effective, the student must be able to make sense of the information being delivered. In response, Sell (2005) reinforces the need for explanations to be clear, jargon free, logical, and appropriate to the age and knowledge level of the student (p.51). However, Langness (2000, p. 805) raises a valid perspective, arguing that the quality of the information delivered is only as good as the quality of the knowledge held by the teacher. This is a legitimate view given the lack of standardized terminology in vocal pedagogy (Chen, 2006, p. 68), and the confusion felt by some singing teachers who admit that the scientific and medical complexity of the language used in voice science feels like a "foreign language" (Sell, 2005, p. 70).

The role of imagery as an effective communication tool is also identified in the literature. Advocates Thurman, Klitzke, Theimer, Welch, Grefsheim and Feit (2000a) suggest that imagery, metaphors and analogies are, "absolutely essential in evoking other-than-conscious sensorimotor coordinations" (p. 496) required for pitch and volume production. Additionally, the use of similes such as "like" or "as if" (Clements, 2008, p. 2), allow the teacher to modify the language used to make it more relevant to the student (Clements, 2008).

Imagery may also be a useful teaching tool for younger children in which their musical vocabulary is in the rudimentary stages (Langness, 2000, p. 804). Indeed, a study by Chen (2006) confirms that the role of imagery is still commonplace in the singing studio, with observed teachers using verbal imagery during their lessons every five to nine minutes (p. 106). However, debate still surrounds its efficacy in vocal development. Criticisms into the effectiveness of imagery and gesturing stem from the variable use of terminology (Nafisi,

2010), with concerns that language and imagery that is not grounded in scientific fact has the potential to yield undesirable results (Clements, 2008, p. 43).

Soliciting student feedback via questioning also plays an important role in vocal development. Sell (2005) highlights that student-led communication aids in the development of a, "self-critical, listening approach" (p.50), and builds "autonomous self-determination" (Thurman, 2000a, p. 172). Thurman (2000b, p. 223) suggests a three-step approach in the pursuit of feedback as this summary reveals,

1. ask constructively worded questions about what happened;
2. repeat a learner's response to questions, or summarise it, often in the form of a question;
3. describe their own perceptions of what the learner(s) did, in order to provide a model of construction feedback vocabulary that learners may use for the self-perceived feedback that they can provide for themselves and other people.

The literature also reveals that the language used in questioning should be constructive rather than judgmental (Welch, 2000, p. 715). Thurman and Klitzke (2000a) reiterate, "There is a powerful difference between telling someone "You are singing incorrectly", and saying to them "Are you singing with more efficiency today than you were last week?" (p. 591). Indeed, a study by Rutkowski and Miller (2002) explored the effectiveness of teacher feedback and modelling on 38 first-grade students. Their results concluded that a student's singing achievement improved when they received constructive feedback followed by teacher modelling in comparison to those who did not. Indeed, much research (Numminen, 2014; Richards & Durrant, 2003), has identified a strong correlation between a teachers negative feedback and the discontinuation of future singing. Langness (2000) also cautions the overuse of 'praise' in the singing studio, suggesting that while it endeavours to make the student 'feel good' it, "provides little or no information about the student's vocal output" (p. 805). This supports the results from the study by Schmidt (1995) which concluded that "improvement feedback" was valued more highly by choral students than "norm-referenced feedback" which was described as "bad, meaningless, insincere and ineffective" (p. 325).

Auditory feedback

The ability for students to be aware of the sound they produce is a valuable tool in vocal development (Welch, 2000). According to Nair (2007), the most prevalent auditory tool found in most singing studios is the digital recorder due to its accessibility via smart phones, portability, and ease of use (p. 32). As audio recordings provide an objective source for aural evidence, this may aid in redirecting the student's "inaccurate internal aural perception" (Nair,

2007, p. 32). Indeed, a study by Southcott and Mitchell (2013) confirmed the efficacy of audio recordings, with participants citing increased confidence as valuable outcomes.

Visual feedback

Visual feedback is also an important contributor to vocal development (Welch, 2000, p. 715). In the singing studio, the humble mirror provides important visual cues by allowing the student to monitor technical processes such as mouth position and posture (Nair, 2007, p. 32). In addition, studies have confirmed the successful application of teacher-modelling (Rutkowski & Miller, 2002) and kinaesthetic gesturing such as hand movements or Kodaly (Liao, 2008) on improved vocal development.

More recently, the use of computer-aided feedback known as 'real-time visual feedback technology (VFT)' has become more accessible to the singing teacher. Indeed, a number of studies (Callahgan, 2014; Callaghan et al., 2003; Leong & Cheng, 2014) have confirmed the usefulness of computer-aided visual feedback in the vocal development process by allowing the student to analyse vocal performance from an objective perspective. One significant supporting study was the "VOXed project" conducted by Welch, Howard, Himonides and Brereton (2005) which examined the effectiveness and application of real-time visual displays in the singing studio environment. Both the participants and students involved concluded that they were positive about the benefits of having feedback technology in the singing studio. Not only did it provide a visual representation of vowel quality, length of vowels and consonants, vocal register transitions and student breathing behaviours, it allowed the singing students behaviour to be 'frozen' in time, thus facilitating enhanced communication of teaching aims and understanding between the teacher and student (Welch et al., 2005, pp. 240-241).

However, it should be noted that the support for VFT in the singing studio is not always positive. Callaghan et al. (2003, p.8) suggest that unsupervised practice with VFT could lead to the unbalanced development of various aspects of the voice while Hoppe, Sadakata, and Desain (2006, p. 310) also add that VFT may create a distraction from the singing task. In addition, Leong and Cheng's (2014) research highlighted that while beginning singing students benefited from the feedback, the "pitch accuracy of skilled singers decreased because of the extra cognitive load" (p. 286).

Teacher-student relationship

A correlation between the personal attributes of the singing teacher and a successful relationship featured repeatedly in the literature (Harrison, 2004; Yang, 2002). Sell (2005, p.48) highlights that singing teachers should possess, "enthusiasm, efficiency, friendliness, good humour, humility, the realization that he or she can never know too much, an open mind, and the experience and knowledge to change repertoire and method from time to time as appropriate". In addition, a study by O'Bryan (2010) of four eminent Australian singers and their relationship with their respective singing teachers revealed five core teacher attributes. These included respect, affinity, the power of the teacher to influence the life of the young singer, friendship, and trust (pp. 63-64). Indeed, one of the key components to a successful teacher-student relationship is to build an environment that is supportive and open to learning (Welch, 2000, p. 713). As the singing voice is intrinsically linked to the individual's body and identity, a teaching environment that fosters trust is imperative (Brand, 2016). For adolescents, both male and female, this is even more important. Extensive research (Greenstein, 2012; Harrison, 2006; McRoy, 2011) has been conducted into the correlation between adolescent self-identity and the retention of both males and females in the singing process. Gackle (2006, p. 35) reiterates that it is the teachers responsibility to use music as a means of contributing to positive self-image, expression and self-esteem through nurturing and empathic teacher and student interactions.

However, the teacher-student relationship also raises ethical issues of boundaries. The literature highlights that the role of the modern singing teacher has extended beyond being just a "voice technician" (Miller, 1996, p. 209), and now incorporates job descriptors including caregiver and counsellor (Ware, 2005). This raises the question: what happens when a student becomes a friend? Although a teacher must be nurturing and supportive, professionalism must always prevail, "The student must always behave like the student and the teacher must always behave like a teacher" (Sell, 2005, p. 48).

However, despite numerous positive teacher-student recollections, the relationship is not always harmonious. Collens and Creech (2013) highlight, "one-on-one tuition can develop into a site of interpersonal conflict and high anxiety where the relationship itself can become obstructive to learning" (p. 151). A survey by Serra-Dawa (2010) which investigated the teacher-student relationships of tertiary voice students also confirms this statement, with results concluding 40 per cent of students wished to change teachers citing interpersonal issues as the primary cause. Additionally, Gaunt (2011) highlights a number of potential tensions that may arise in one-on-one relationship, including over-dependence of the student

on the teacher, and power struggles leading to a lack of autonomy (p. 162). In light of this, such disharmony in the teacher-student relationship highlights the importance of understanding the learning style of the student and adapting teaching strategies and communication styles to maximize cohesion (Thurman, 2000b, pp. 269-270).

Pedagogical orientation

The literature reveals three main pedagogical approaches in the teaching of singing. These have been identified as traditional, mechanistic, and holistic. Each of these approaches will be discussed further below.

Traditional

Callaghan (2014) highlights that the tradition of teaching singing can be traced back over many centuries, "originating in Italy early in the 17th century and flourishing in the 18th and 19th centuries" (p. 1). Furthermore, the "virtuoso musician became idolised and sought after by students" (Daniel & Parkes, 2015, p. 108) giving rise to the master-apprentice model. Indeed, characteristics of the traditional pedagogical approach retain many of the characteristics of this period. Callaghan (2014) suggests that traditional practitioners apply methods largely based on knowledge derived from previous study stating, "the majority never have never had formal training in vocal pedagogy…most of them acquired knowledge of vocal function through doing, listening, observing and consulting with colleagues" (p. 166). Furthermore, O'Bryan and Harrison (2014) state that traditional pedagogy focuses on, "the use of visual imagery through verbal instruction, imitation of vocal models and gestural instructions" (p. 3).

Mechanistic

In contrast to the traditional approach, mechanistic pedagogy focuses on the objective and scientific (Ware, 2005), with teaching usually delivered through direct instruction (Sell, 2003). Learning centres around the technical aspects of vocal production (Miller, 1996), and employs the concepts of voice science and the understanding of vocal physiology (Callaghan, 2014).

Holistic

This approach recognises that there is, "no one right way to teach" (Sell, 2003, p. 76). Instead, holistic teaching is a balance of craft knowledge, voice knowledge, and professional knowledge (Callaghan, 2014, p.171). Through the application of diversified teaching

strategies, a holistic approach aims to address the cognitive, affective and psychomotor domains of the individual student to facilitate enhanced learning and development (Sell, 2003, p. 77).

Role of the singing teacher

The role of the singing teacher is many and varied. A review of the literature highlights a number of key responsibilities expected of the singing teacher in regard to student vocal development.

One of the most obvious responsibilities of the singing teacher is to increase the vocal efficiency of their student. Sell (2005) reiterates, "the teachers most important task is systematically to teach freedom and efficiency of function in the singing voice" (p. 78). For Thurman and Welch (2000a), this means taking into consideration the totality of the body-mind philosophy which acknowledges that, "our voices are intimately connected with everything we have experienced, felt, learned, or done, and those are all biological processes" (p. xxiii). Finally, Williams (2012, p. xxiv) notes that the primary role of the singing teacher is to act as a facilitator through the use his or her knowledge and skills.

The second role of the singing teacher is to acknowledge the individuality of the student in respect to their body, learning style and personality. This is particularly important in regard to adolescent voice change. Cooksey and Welch (1998, p. 109) caution the singing teacher to take an enlightened approach to voice maturation and the practical application of appropriate teaching methods.

Patenude-Yarnell (2003) concisely highlights the next role of the singing teacher stating, "teaching students how to teach themselves should be our goal" (p. 256). O'Bryan (2010, p. 50) agrees, suggesting a student's vocal potential is intrinsically linked to self-direction and autonomy in decision making. However, Carey and Grant (2015) highlight that personal learning styles may create a barrier in autonomy. In light of this, Nisbet (2010) suggests that teachers need to adapt their teaching style to the learning continuum of the student, stating, "Instruction should move from an interactive phase of external support, through a transition of increased apprenticeship that encourages self-reliance, into self-monitoring and self-regulation when the learner is able to take full responsibility" (p. 109).

Furthermore, the singing teacher should be a source of inspiration, motivation and psychological growth (Aggett, 2010, p. 202). Interestingly, in a survey by Hargreaves, Welch and Marshall (2003) of post-graduate teacher education students on what they consider to be the most important skills for a music teacher to possess, "the ability to inspire and enthuse others" (p. 181) was rated most highly.

Finally, the goal of the singing teacher should be towards the evolutionary student, as Welch (2000) highlights, "Teachers are not diminished if they acknowledge self-ignorance or uncertainty, but only if they accept these as inevitable and acquiesce to them" (p. 714).

Conclusion

The literature review explored the concept of vocal development from two perspectives. The first two sections of the review focused on the extrinsic influences on vocal development brought about by age and gender. It outlined the physical changes that occur to the larynx and the vocal folds as the individual gets older, and highlighted the specific implications that gender imposes on vocal production and efficiency. The final section of the review examined the ways in which the singing teacher influences vocal development through teaching methods, feedback methods, student-teacher relationships and pedagogical orientation. As these factors have been identified in the literature as being directly influenced by the singing teacher, they have been used as the basis of formulating the interview schedule. Further methodological approaches will be expanded in the following chapter.

CHAPTER 3: RESEARCH METHOD AND DESIGN

Introduction

The purpose of this study was to investigate the singing teachers role in the development of young voices. The research was guided by three subset questions including,

1. What factors influence the development of young voices?
2. How do these factors influence the role of the singing teacher in regard to the development of young voices?
3. How important is the role of the singing teacher in the development of young voices?

This chapter will outline the research design. It includes an introduction to the theoretical framework used to underpin this study, as well as outline of research design, participants, data collection methods, and data analysis methods. A discussion of the limitations, justifications and ethical considerations are also included.

Theoretical Framework

The Vocal Development Model formulated for this research provided the overarching theoretical standpoint from which this research was aligned, and was based on Burnard's 'Framework for understanding multiple musical identities' (2012b, p. 223). Through the creation of this framework, Burnard sought to correct the, "romantic stereotype that viewed creativity as the sole output of an individual genius" (Burnard, 2012a, p. 3), and expand the definition to a more plural expression characterised by social, cultural and habitus aspects (Chen, 2017, p, 1). Burnard's framework integrates the works of both Csikszentmihalyi's Systems Model of Creativity (1999) and Bourdieu's Theory of Practice (1993).

Csikszentmihalyi's model consists of an interrelated system of three core elements. The first is the '*domain*' which consists of symbolic rules and procedures (Csikszentmihalyi, 1996, p. 27). Singing is an example of a domain as it is bound by its own set of rules and language. The second is the '*field*' which encompasses the key people or "gatekeepers" within that domain, who are responsible for deciding, "what belongs to a domain and what does not" (Csikszentmihalyi, 1999, p. 315). The final element is that of the individual or '*person*' that, "must have access to the domain and must want to learn" (Csikszentmihalyi, 1999, p. 328).

Bourdieu's Theory of Practice seeks to understand and explain individual and group actions in the social world (Rhynas, 2005, p. 181). It consists of three entities, '*field*', '*capital*' and '*habitus*', in which the 'field' constitutes "specific forms of practices, and principles of both the practice and the work produced within it" (Burnard, 2012b, p. 222); 'capital' represents the power of a person and can be used to manipulate their position within the 'field'; and 'habitus' which represent, "a set of internalized dispositions that operate in a large number of social spheres" (Burnard, 2012b, p. 272).

Burnard's framework was adapted for this study to facilitate an understanding of the interactions that occur between the field of singing, the singing teacher and the singing student. Similar to Burnard's framework which acknowledges that musical creativity, "does not arise in the same way" (Burnard & Haddon, 2015, p. 12), the adapted model acknowledges that the vocal development path is unique for every individual, and is influenced by, "the diversity of actors and stakeholders in and across fields" (Burnard & Haddon, 2015, p. 13) including the singing teacher, the singing student, parents, schools, and friends. It also highlights the role of the singing teacher in navigating the "temporal modalities" (Burnard, 2012b, p. 223), or extrinsic factors of the young student including age and gender as identified in the literature.

The adapted model also seeks to determine how the 'habitus' (Rhynas, 2005) or individual history of the singing teacher directly influences the application and effectiveness of "practice principles" (Burnard, 2012b, p. 223), including teaching methods, feedback, and pedagogical orientation. Most importantly, just as Burnard's framework, "encourages us to look beyond the dominant discourse, to steer constantly back and forth between the circles" (Burnard, 2012a, p. 10), the Vocal Development Model seeks to determine how the role of the singing teacher influences the development of young voices.
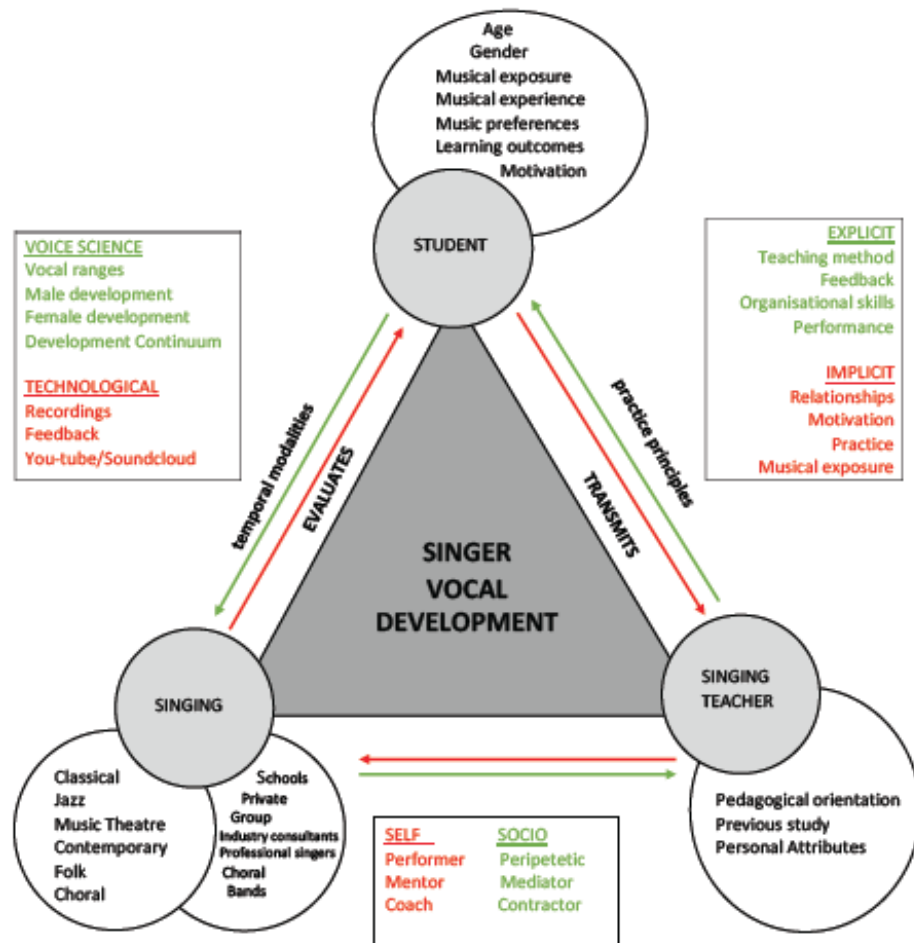
Figure 3.1: Vocal Development Model (adapted from Burnard's Synthesized framework for understanding multiple musical creativities, 2012b, p. 223)

Research Design

According to Lichtman (2006, p. 8) the main purpose of qualitative research is to provide an in-depth description and understanding of a human experience. Furthermore, this inductive approach (Bogdan & Bilken, 1998, p. 6) allows for meaning and understanding to "emerge" from the study (Merriam, 1998, p. 160). Therefore, given that this research was of an exploratory nature, a qualitative method using a multi-case study design was deemed most appropriate. This provided the study with a greater breadth of data in which responses could more readily be compared and contrasted for emergent themes (Merriam, 1998, p. 27). In addition, the use of open-ended structured interviews allowed for data on the pedagogical practices to be collected from the singing teachers perspective.

Participants

Selection and sample

For this study, the type of purposive sampling that Patton (2002) describes as, "homogenous sampling" (p. 235) was used. This method was chosen above others, as the aim of the research was to focus on the practices and perspectives of the subgroup of private singing teachers in comparison to the general population of teachers that are involved in the process of teaching singing, which could include classroom teachers or choral conductors.

The participants in this research were singing teachers based in New South Wales. Prospective participants were invited to participate based on their experience in teaching young voices and not for any specific repertoire taught. In order to participate, they were also required to meet following criteria:
- Have at least three years voice teaching experience, and
- Receive financial payment for the teaching of singing.

Table 3.1 provides a summary of the participants qualifications, years of training and types of teaching. The specific demographic details of the participants are further expanded in the following chapter and are available in Appendix D, Table 1 (pp. 82-83).

Participant #	Qualifications			Years Teaching	Types of Teaching	
	Dip/Cert	Degree	Industry		Private	Group
1			✓	13	✓	
2		✓		8	✓	
3			✓	10	✓	✓
4			✓	15	✓	✓
5	✓		✓	20	✓	
6		✓	✓	19	✓	
7		✓	✓	10	✓	
8		✓	✓	20	✓	
9		✓	✓	19	✓	✓

Table 3.1: Summary of participant sample

Following ethics approval, a list of potential participants was identified from a number of Internet sites. These sites included:

- Music Teachers Online – www.musicteachersonline.com.au
- The Music Teachers Association of NSW – www.musicnsw.com.au
- Australian National Association of Teachers of Singing (ANATS) – www.anats.org.au
- Australian Music Teachers Register – www.amtr.com.au

In addition, an introductory letter was sent to the administrator of the Australian National Association of Teachers of Singing (ANATS) seeking permission to post an Invitation to Participate on their Facebook page.

The sample size for this study consisted of nine participants. In determining the sample size for this study a number of factors were taken into consideration, and included the breadth and scope of the research question, the theoretical underpinning (Bryman, 2012, p. 19), accessibility to participants (Adler & Adler, 2012, p. 8), and time constraints of the research (Mason, 2012, p. 30).

Participant recruitment

Following the identification of potential participants from the publically listed websites mentioned above, an introductory letter was emailed with an attached Invitation to Participate and Consent Form (see Appendix B). In total, 13 participants replied to the initial email. From these, four stated that they either did not meet the requirements of the study or did not have sufficient time to participate in the interview. The remaining nine participants all agreed to take part in the interview, and returned their signed Consent Form via email. Participants were then emailed asking them to identify a selection of days and times that were most convenient for the interview.

Data Collection Methods

Interview

As the purpose of this study was to gain an insight into the teaching strategies employed in the vocal lesson from the participants perspective, the standardized open-ended interview method was considered the most appropriate (Patton, 2002, p. 344). The structured nature of the questioning, in which the exact wording and sequence of questions were asked to each participant, ensured that complete data was collected on each subject, thus allowing for increased response comparisons (Cohen, Manion & Morrison, 2007, p. 353). In addition, the

use of open-ended questioning allowed the participant to freely answer the questions (Mertens, 2005, p. 387), in turn, "permitting a more thorough understanding of the respondent's opinions and reasons behind them" (Borg & Gall, 1989, p. 452).

The participants had a choice of having a face-to-face interview, telephone interview or Internet interview. Of the nine participants, six chose to be interviewed via telephone, while the remaining three chose the Internet method via FaceTime. This research incorporated the use of telephone and Internet interviewing for a variety of reasons. Carr & Worth (2001) highlight that one of the main advantages of telephone and Internet interviewing is the increased response rate by participants, and the speed of data collection. Indeed, the researcher noted that participants were more willing to participate in the interview given these options, as it allowed for increased flexibility in regard to interview scheduling. These methods also negated any travel costs that would have been associated with face-to-face interviews.

Interview schedule

Borg & Gall (1989, p. 451) state that an interview schedule standardizes the interview process by listing in the desired sequence the questions that are to be asked during the interview. The interview schedule (see Appendix C) for this study consisted of forty-one questions. These questions were divided into seven categories, with specific questions designed to provide information based on the research objectives. The questions used were implemented to provide three main types of information: 1) background and demographic information, 2) behaviour and action information, and 3) opinion and perception information (Patton, 2002, p. 350).

The categories included:
1. Teacher background (11 questions)
2. Teaching methods (12 questions). This section made specific reference to warmup exercises and repertoire selection
3. Performance opportunities (2 questions).
4. Feedback (6 questions). This section included questions on feedback methods, technological feedback and external feedback.
5. Student-teacher relationship (2 questions).
6. Pedagogical approach (5 questions).
7. Vocal development (3 questions).

Interview Administration

All interviews were conducted between the 12th July, 2017 and 1st August, 2017.

Once a day, time and preferred method of contact had been confirmed and informed consent secured, participants were sent a follow up email the night before the interview to confirm that they were still able to participate. The interview was conducted from the researcher's private residence in a secure, quiet room. Telephone contact was made using the researchers own IPhone, while Internet contact was made using the researcher's personal computer and FaceTime account. The interview was digitally recorded using two methods, 1) the researchers own IPhone 7 using Voice Memos, and 2) the researchers own MacBook using Voice Notes. The average interview lasted approximately 50-65 minutes.

At the beginning of each interview, the researcher explained the nature and aims of the study as outlined in the Consent Form, how the interview questions would be structured (participant background, teaching methods, feedback methods, student-teacher relationship, pedagogical orientation, vocal development), and how long the interview would approximately take. The participants were also advised that the interview was being recorded, and informed that they could request the recording or the interview to be terminated at any time. The participant was then asked if they would still like to continue and if they had any questions for the researcher before the interview began.

The interview was conducted using the pre-determined questions discussed in the section above. If a participant answered a forthcoming question in an earlier response, that question was not asked if the researcher felt that sufficient information had been provided. If the researcher felt that further elaboration was required, the question was asked in the pre-set sequence. Follow up questioning such as, "Could you give me an example?" or "Could you tell me some more about that?" was used to gather more information from the participant on responses that required more elaboration.

Data Analysis

Mertens (2005, p. 420) reiterates that, "data analysis in qualitative studies is an ongoing process…findings are generated and systematically built as successive pieces of data are gathered." As this research did not propose an initial 'theory' or 'hypothesis' to be tested, the constant comparison method of analysis was employed. This technique involved continuously comparing the data from one interview with another interview (Lichtman, 2006, p. 66). With the aim of determining similarities and differences and ultimately uncovering patterns in the

data from which theories can emerge (Merriam, 1998, p. 18), the process of data analysis followed four steps.

The use of open-ended questioning during the interviews provided a large quantity of thick descriptive data (Wiersma & Jurs, 2009, p. 276). Therefore, the first step was to produce a verbatim transcription within 48 hours of completion of the interview. Each interview was entered directly into the computer program NVivo. Patton (2002) highlights that through the transcription process, the researcher is able to immerse themselves in the data, and generate "emergent insights" (p. 441).

The second step involved constructing broad categories in the analysis that were based on recurring themes (Merriam, 1998, p. 179). Some examples of initial categories included student needs, self-awareness, and vocal efficiency. Content analysis (Silverman, 2011, p. 64). was also used during this step, in which the frequency of responses were tabulated for each interview question (see Appendix D). As each new interview was conducted and transcribed, previous data was re-read and compared with the new data to identify if nodes and concepts were replicated or if new categories needed to be created. These are discussed in Chapter 4.

The third step was theorizing the data, which Merriam (1998) describes as moving beyond the purely descriptive and narrative analysis to a, "more conceptual view of the landscape" (p. 187). During this process, initial categories were re-read and re-analysed to establish concepts based on the research question. This final stage of analysis revealed emergent themes on which Chapter 5 is based.

Reliability and Validity

Wiersma and Jurs (2009, p. 296) define reliability as the extent to which studies can be replicated in both procedures and findings. It stipulates that for a study to be reliable, it should yield the same results if repeated by another researcher (Merriam, 1998, p. 205). Furthermore, validity refers to the interpretation and generalization of the research results (Wiersma & Jurs, 2009, p. 9).

In this study, a number of actions were implemented to enhance the reliability and validity of the research outcomes. First, the use of structured interviews which used the same format and sequence of questioning, "minimized variation in the questions posed to interviewees" (Patton, 2002, p. 342), thus increasing validity and minimizing bias during the interview stage

(Cohen et al., 2007, p. 151). Secondly, by recording and transcribing the interviews verbatim ensured that a "chain of evidence" was maintained, therefore increasing confirmability of the data (Mertens, 2005, p. 257). The constant comparative method used for coding and analysis (Merriam, 1998, p. 18) also increased the validity of the results. Finally, the sample of nine participants allowed for large amounts of data to be analysed, thereby enhancing the generalizability and external validity of the results (Merriam, 1998, p. 208).

Ethical Considerations

Firstly, all research in this study received full approval from Macquarie University Faculty of Arts Human Research Ethics Committee – Approval Number: 5201700445.

Secondly, Kvale (1996) states, "An interview inquiry is a moral enterprise: The personal interaction in the interview affects the interviewee, and the knowledge produced by the interview affects our understanding of the human situation." (p. 109). Therefore, protocols were applied to the research for the de-identification of the participants. The "clean data" (Kaiser, 2009, p.1635) approach was implemented, in which the data collected, "does not contain any information that identifies respondents, such as name and address (such identifying information might be stored elsewhere, in separate protected files)…and the names of respondents can be replaced with pseudonyms". Accordingly, participants were identified using the pseudonyms Participant #.

The participant was also supplied with an Information and Consent form (see Appendix B). This provided a summary of the aims, design, possible consequences of the research (Kvale, 1996, p. 112), and any plans for the distribution and proposed audience of the report (Stake, 1995, p. 56). The Consent Form also informed the participant that involvement in the study was voluntary and that consent to participate could be withdrawn at any point during the study without recourse. In addition, countersigned informed consent forms were emailed back to the participants for their records.

Conclusion

This chapter presented the theoretical and methodological framework on which this research was constructed. It included the research questions, the participant sample, data collection methods, data analysis methods, and ethical considerations. The results of the interviews are discussed in Chapters 4 and 5, and are supported with narrative vignettes and data excerpts.

CHAPTER 4: FINDINGS

Introduction

The findings discussed in this chapter are determined from the analysis of open-ended qualitative interview responses. Nine participants were questioned to determine their application and perception of practical teaching strategies during the vocal lesson on the development of young voices. While this chapter focuses on pedagogical components, approaches and associated issues with teaching developing voices, the following chapter discusses emergent themes.

This chapter is divided into sections that mirror the structure of the interview schedule. This includes a brief description of the participant demographics, as well as the presentation of key responses to the questions relating to teaching methods, feedback methods, teacher-student relationships, pedagogical orientation, voice science, and vocal development. Direct quotations from the participants have been included where appropriate to aid contextualisation; tabulated results are located in Appendix D.

Demographics

All of the participants were female, with an average age of 48 years. Four of the participants held both tertiary and industry experience, while three of the participants had industry experience only. All of the participants taught one-on-one lessons, with eight participants teaching from a home studio, and the average years of teaching was 14. All of the participants taught both male and female students, and the most frequently taught age range of students was between 11 to 40 years. (See Appendix D, Table 1, p. 82).

Vocal exercises

Participants were questioned in relation to the tailoring of exercises, the types of exercises and the intent of the exercises (see Appendix D, Table 2, p. 83).

The results revealed that all participants performed some form of warmup routine of approximately 10-15 minutes at the beginning of the vocal lesson.

When questioned on where participants sourced their vocal exercises (see Appendix D, Table 3, p. 83), four participants commented that they used vocal exercises from their previous learning experiences with other singing teachers. This is highlighted in the following responses:

> [Warmup exercises were sourced] from a lot of teachers that have taught me and that I have found useful for myself, then I will apply them. (Participant #8)

> They're ones that I've been doing since I've been learning. (Participant #2)

The results also indicated that three of the participants obtained their vocal exercises from either online sources such as YouTube tutorials, or created their own original warmups in response to the student's individual technical needs:

> From my own head in terms of what I'm trying to achieve. (Participant #5)

> I'm specifically coming up with stuff that I know will help someone and I'll create a scale or a sound that I want which will help them. (Participant #7)

Three of the participants likened the practice of vocal exercises to how one would warm up and train for a sport, a comparison that was also identified in the literature by Sell (2003, p. 174). Participant #8 commented on the literal warming up and preparation of the muscles for physical use:

> I put it this way, when you're on the soccer field do you just go and play a game? No, you go and train, you work the different muscles to get those balls into the net.

In addition, five participants identified using a structured warmup routine, beginning with "non-melodic pathfinding pitch patterns" (Thurman et al., 2000b, p. 789) including physical movement exercises, stretching, sirening, and humming to target breathing and body tension, followed by "melodic pathfinding pitch patterns" (Thurman et al., 2000b, p. 789) including triads, scales, arpeggios and chromatics to target technical skills, as indicated in the following responses:

> We always start with breathing work and then technical work depending on what they're working on. (Participant #7)

> I usually start with breathing warmups to practice their low breath, then I proceed to musical warmups, so that would be different warmups that require different musical outcomes. (Participant #8)

This structured approach of moving from less strenuous (Thurman et al., 2000b, p. 790) to more targeted exercises is well supported by the literature (Callaghan, 2014; Miller, 1996; Sell, 2005).

Participants also noted that they frequently used non-melodic exercises for vocal exploration, especially in male adolescents undergoing voice change, to determine their current vocal limitations (see Appendix D, Table 10, p. 86), as reflected in the response by Participant #5:

> The siren is very important to get them to become aware of how far they can take the siren and convince them that they can sing up there, maybe not today or tomorrow, but eventually.

The participants also indicated a number of factors that were taken into consideration when tailoring exercises for students (see Appendix D, Table 2, p. 83). Indeed, the individual technical needs of the student was the primary consideration of seven of the participants. Linking the exercises to the repertoire being studied was the second consideration identified. The quotation from Participant #2 provides an example of this:

> If we're looking at something difficult within the song, we will do the exercises.

Selecting exercises based on the vocal range of the student was the third factor considered. Other considerations identified included age, gender, current skill level of the student, and the level of difficulty of the warmup being offered.

The participants were also questioned on their perception of the benefits of vocal exercises on the development of young voices (see Appendix D, Table 4, p. 84). The results revealed that a majority of participants (*n=7*) indicated building technique as the main contributor to vocal development. This view is reflected in the following responses:

> I guess it's just developing those muscles and building up the strength, isn't it? (Participant #6)

> Helps to develop the range and how to work through the different registers, good for articulation and breathing as well. (Participant #2)

This result is consistent with the literature, which highlights the correlation between the performance of vocal exercises, accelerated skill acquisition (Thurman, 2000b), and increased vocal efficiency (Callaghan, 2000; Glover, 2001).

Participant #4 also indicated that vocal exercises were an important factor in establishing correct vocal health and hygiene habits:

> Particularly with young students where their voice is still not fully developed, warm ups are even more important because we're just gently easing the vocal chords into the work we want them do. There's so much over singing and vocal abuse happening through that age.

> Increased student confidence was also revealed to be another significant benefit to young vocal development, as reflected in the statement from Participant #5:

> They are really an opportunity for a student to feel, "Hey, I can do this stuff! All I have to do now is transfer this into the songs".

Participants also commented that the repetitive nature of the warmup routine provided the student with a sense of security, and aided in their self-awareness of how and what sound was being created.

Repertoire

With regard to repertoire, participants were initially questioned on their selection methods, in which four main considerations were identified (see Appendix D, Table 5, p. 84). Aligning repertoire selection to the interest of the student was considered the key factor when choosing repertoire. This strategy is supported by Gackle (2000b, p. 820). Participant #4 commented that selecting songs that a student 'liked' resulted in improved motivation and engagement:

> I teach them from what they love because then they'll practice more.

The results indicated that aligning repertoire to the interests of students was a common strategy, with five stating that they allowed the students to guide the repertoire studied (see Appendix D, Table 6, p. 84).

However, it should be noted that although these participants encouraged their students to bring in repertoire suggestions, it was the participant that ultimately made the final decision:

> I like them to bring in what they like, but I reserve the right to say "no". (Participant #7)

The second consideration identified related to selecting repertoire with text appropriate to the age and personal experience of the individual student. This point is highlighted in the quote by Participant #8:

> I had a lad bring in a few songs for me to have a look at. They were musically easy, but I just didn't think the words and the content was something he had experienced.

Indeed, the age of the student was a factor considered by three of the participants when selecting repertoire, as was the skill level of the student, and the key of the piece. Interestingly, only two participants considered transposing keys important when selecting repertoire for a male adolescent undergoing voice change (see Appendix D, Table 8, p. 85).

Participants were also questioned on the importance of repertoire selection on the development of young voices (see Appendix D, Table 7, p. 85). Building confidence through achievable repertoire was identified as being the key benefit to young vocal development. Participants commented on the importance of balancing the challenges contained within the repertoire to the capabilities of the student in order to maintain positive self-identity and motivation. This sentiment is highlighted by Participant #7:

> You don't want to let people pick stuff that they're going to do a bad job at and then make them feel inadequate in their own singing.

The importance of repertoire in reinforcing vocal technique was also identified as another key contributor to the development of young voices. Participants commented on using repertoire to refine the practical application of techniques learned in the technical exercises.

Feedback

Participants were questioned on the methods of feedback used during the lesson (see Appendix D, Table 13, p. 87). Although a variety of methods were utilised, three main methods were identified. Technological feedback was identified as a method that was used by all participants, with digital audio recorders indicated as the most popular being used by six participants (see Appendix D, Table 16, p. 88). Participants commented that digital recorders were used on a regular, if not weekly basis, largely due to their prevalence through smartphones, as well as their portability. In contrast, participants using spectrographs and videoing commented that these devices were used on an irregular basis, with video primarily used to record performances to analyse performance technique.

Participants also noted that the immediate auditory or visual feedback that technology provided was one of the main benefits to the development of young voices (see Appendix D, Table 17, p. 88), a benefit which is also supported by the literature (Callaghan, 2014; Callaghan et al., 2003; Leong & Cheng, 2014). Participants also indicated that technological feedback was valuable to the development of young voices it provided an objective perspective for the student to analyse their sound or technique, aiding in greater understanding. It was also identified as being an effective tool for initiating discussion. Positive praise was also identified as being a method used by all participants. This method of feedback included the regular use of affirmations to reinforce correct technique and sound production, while verbal encouragement was used when a student was applying a new technique or encountering a challenging section in the repertoire, as reflected in the participants responses:

> I'm really big on affirmations, so nearly every second scale when I'm taking them up I'm saying, "Yep, that's good, yep that's great, OK keep going". (Participant #4)

> I try to encourage them when they do something new. (Participant #2)

It was interesting to note that other forms of verbal feedback, including constructive criticism, discussion, and explanations were used less frequently than positive praise during the vocal lesson. Further to this, all participants indicated that they altered their method of feedback to cater to young students (see Appendix D, Table 14, p. 87), with simplifying the language identified as the most frequently employed strategy (see Appendix D, Table 15, p. 88). This is evident through the responses:

> With younger students in particular, I am very careful with jargon and also their ability to really understand. (Participant #1)

> The wording has to be different because a lot of things kids care about are totally different things. (Participant #4)

Student-led feedback was also used by four of the participants. This method of feedback centred around obtaining information from the student, for example in regard to what they were feeling (kinaesthetic) or what they were having difficulties with, so that appropriate strategies could be applied. Participant #7 reiterates this approach stating:

> Something I've been trying to do is solicit their opinion before I give mine to find out what they're thinking so I'm not too leading in my praise or instruction.

The results also revealed a wide variety of alternative feedback methods utilised during the singing lesson, including the use of mirrors and diagrams, and written feedback including emails.

Participants were also questioned on the ways in which they felt performance opportunities contributed to the development of young voices (see Appendix D, Table 12, p. 86). Responses indicated that increasing the confidence of the student and enhanced performance skills were perceived to be the greatest benefit. Participants also noted that performance opportunities encouraged ongoing practice, and assisted in performance anxiety problems. However, it was interesting to note that a number of participants identified external feedback from performance opportunities such as eisteddfods and examinations as a factor that could potentially hinder the development of young voices (see Appendix D, Table 18, p. 89). This was apparent when participants commented that the subjective opinions of adjudicators or judges during competitions could actually decrease student confidence and motivation. Participants also commented on the dangers posed by the one-dimensional nature of the examination process, in which examiners can only respond to the snapshot of performance with which they are presented, disregarding any external influences that may be influencing the performance on the day (see Appendix D, Table 19, p. 89). These views are reflected in the statements:

> The trouble with these sorts of things is that you as the teacher are acutely aware of the weaknesses and things that need to be fixed up. When you go in as an adjudicator or as an examiner, you are meeting the person for the first time and hearing what they have prepared. They have limitations. (Participant #8)

> I do find that it can be a problem with a lot of adjudicators or examiners that are quite – let's say traditional. Sometimes you'll get feedback from eisteddfods that is quite contradictory from other judges which is quite ridiculous! (Participant #1)

Teacher-student relationship

In this section, participants were questioned on the methods they employed to foster a positive teacher-student relationship, and their perception of its importance in the development of young voices.

When concentrating on the methods used, the results indicated that seven of the participants started their lessons with friendly conversation in order to maintain a positive teacher-student relationship (see Appendix D, Table 20, p. 89). Participants commented that this time was used to enquire how the student's day or week had been, and how they were feeling physically:

> I put a bit of space between the scheduling of the lessons so that we begin with a bit of chit chat and end with a bit of a chat. (Participant #2)

> I always ask them how they've been and how their day has been, what's exciting that's coming up. (Participant #3)

Participants also indicated that the benefits of this strategy were two-fold. Not only did it promote deeper relational ties by achieving a greater understanding of the student's life, family and friends, it was also used as a diagnostic tool to hear how the student's voice was sounding. For example, a student may reveal that they have just come back from a three-day school camp, providing information to the teacher that they are likely to be tired and fatigued, resulting in reduced vocal performance.

Treating the student like a friend or family was identified by four of the participants as a further method employed to build a strong teacher-student relationship. However, this method was applied with varying degrees of intensity by different participants, as reflected in the following responses:

> I am the mother hen…most of my girls hug me when they come in – I'm very hands on. I do create it like it's a family. (Participant #4)

> I make sure that we have a good rapport but I definitely don't exploit that…I'm very mindful in their lesson that they're paying me a fair amount of money to teach them. (Participant #1)

> Some friendships have developed but I'm always conscience that I am the teacher in the lesson and that they are paying me – it's a work relationship. (Participant #9)

Leading from this, five of the participants highlighted that the creation of a safe and comfortable learning environment was the most important outcome of the student-teacher relationship (see Appendix D, Table 21, p. 90). Participants also commented on the importance of building a trusting relationship with the student. This is evidenced in the following statements:

If you feel comfortable and have that sense of trust you can do a lot more. (Participant #2)

They've got to be open and honest with you about stuff that's going on in their lives…building a nurturing place where they can feel very safe. (Participant #3)

Participants also indicated that instilling a love of singing, and building and maintaining teacher respect were two other important contributors of the teacher-student relationship on young vocal development.

Pedagogical orientation

In this section, the participants were asked to comment on the factors they felt had contributed to their current pedagogical approach (see Appendix D, Table 22, p. 90). Although a number of factors were identified, two main influences emerged. The influence of previous singing teachers was identified as the dominant factor in shaping the respective participants current teaching philosophy. When responding to the question, participants spoke of their previous teachers with fondness and appreciation. Participants commented on the ways in which previous teachers had instilled a love and passion for singing, and how they continue to act as a role model for their current teaching methodology. This is indicated by the following quotations:

I've been lucky to have some really good teachers. The way they conduct the lessons and the rapport we had. I take a lot of that into my own teaching. (Participant #2)

I had a couple of really important teachers and when I started teaching I wanted to be that sort of person for other students. (Participant #7)

This outcome provides further validity to responses (see Appendix D, Table 3, p. 83) in which four of the participants stated that they sourced their warmup exercises from previous teachers, and responses (see Appendix D, Table 20, p. 89) in which four of the participants likened the teacher-student relationship to being like friends or family.

The second significant factor shaping the participants teaching philosophies was their engagement in further study or professional development. This outcome is indicative of the number of participants that had either undertaken further study or were in the process of obtaining additional qualifications (see Appendix D, Table 1, p. 82). The results also identified a number of other factors influencing the participants current pedagogical orientation. These included the role of family, performance experiences, a passion for singing, and previous health issues.

Participants were also questioned on their knowledge and application of the pedagogical approach voice science. When explaining the term 'voice science', the participants offered a range of definitions (see Appendix D, Table 23, p. 91). The results revealed that seven of the participants described voice science as having an understanding of the voice. In this response, participants referred to a number of different subcategories including the Estill method, vocal health, and voice research. Participants also made reference to the vocal anatomy, and more than half of the participants also identified voice science as involving an understanding of the mechanics of the voice.

However, it was interesting to note that although all participants offered a definition of voice science, the inconsistent use of language and terminology provided when answering the questions indicated that there were varying degrees of participant knowledge and understanding of the topic. This is illustrated by the following quotations:

> Breathing wise, yep, I talk about that. That comes under voice science. The breathing fanning the voice through the back, down you know, down to your diaphragm and up. (Participant #3)

> I guess it is the fundamentals of the voice and how everything works together. (Participant #6)

> How the voice works, what the mechanisms are, what the latest research is, how to keep it fit and healthy. (Participant #7)

> It's about understanding how your body works to produce the airflow which produces the sound. (Participant #8)

Despite such anomalies, the results indicated that seven of the participants agreed that it was important for a singing teacher to have an understanding of vocal science in order to teach singing (see Appendix D, Table 24, p. 91). In addition, seven of the participants used voice science to explain technical concepts to their students (see Appendix D, Table 25, p. 91). Anatomical charts and diagrams were identified as the main teaching tool to assist in this process, as was the use of specific terminology. Participants noted a number of benefits to the student through an understanding of voice science (see Appendix D, Table 26, p. 92). These included increased physiological awareness and improved vocal health and hygiene practices. The participants also noted that a shared understanding of the anatomy by the student aids in an improved communication between the teacher and student in regard to teaching technical concepts.

Vocal development

In this final section, participants were questioned on their understanding of the term vocal development (see Appendix D, Table 27, p. 92). The results indicated that four of the participants associated vocal development with increased vocal strength and incremental vocal improvement. Pubertal changes, increased vocal freedom and vocal range were also characteristics synonymous with the term. In addition, participants identified a number of factors that positively influenced the development of young voices (see Appendix D, Table 28, p. 93).

The results revealed that four of the participants viewed the support from friends and family as pivotal to the continued development of young voices. When discussing this factor, respondents commented on the importance of the 'encouragement role' that friends provided. Specific reference on this point was made by Participant #4 in regard to young female singers, in which vocal production, personal insecurity and peer acceptance were identified as being closely linked:

> They're attached to this beautiful sound, and their identity is attached to that sound.

Results also revealed that the provision of a good teacher, and teacher encouragement were two additional factors influencing the positive vocal development in young singers.

Interesting, the singing teacher was also identified as being a factor that could potentially hinder young vocal development (see Appendix D, Table 29, p. 93). Indeed, in some responses the participants expressed criticism of other teachers and their teaching methods. This is evidenced in the following quotation:

> A lot of teachers are very unaware of the age of things that are meant to be done…There's a lot of confusing and bad information out there. (Participant #7)

Conclusion

This chapter presented a summary of the findings from the nine research interviews. It outlined the six pedagogical areas identified through the analysis of interview data. These included vocal exercises, repertoire, feedback, teacher-student relationship, pedagogical orientation and vocal development. While this chapter focused on the pedagogical components, approaches and associated issues within these areas, the following chapter will discuss the overall analysis and the emergent themes.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

Introduction

The analysis detailed in the previous chapter identified several categories and associated issues with teaching developing voices. This chapter discusses the subsequent emergent themes. Three significant themes are identified and are listed as follows:

1. Tailoring teaching strategies (Adaptability)
   The first emergent theme related to the ways in which participants adapted or did not adapt teaching strategies to suit the individual needs of each student and their voice.

2. Creating an independent learner (Guidance)
   The second emergent theme focuses on the participants use of student-led feedback and technological feedback to facilitate student independence. The participants incorporation of voice science to assist in enhanced student understanding of the vocal function is also highlighted.

3. Establishing a safe learning environment (Support)
   The third emergent theme addresses the concept of a safe learning environment from the perspective of teachers. Evident in the 'safe environment' were the ways in which participants expressed the mechanisms in their respective practices that supported the student in their learning.

Emergent Theme 1: Tailoring teaching strategies (Adaptability)

The tailoring of teaching strategies is identified as an emergent theme. Specifically, adaptability was identified in the ways in which participants modified their methods in the three key learning areas of vocal exercises, repertoire selection, and language. The following discussion details the identified issues. In doing so, the discussion theorises resultant considerations and concerns for vocal pedagogy.

Vocal Exercises

The results revealed that all of the participants engaged in a 10-15 minute warmup routine at the beginning of the lesson. In addition, a majority of the participants noted that they tailored warmups and exercises to the individual needs of the student with the intent of developing specific technical aspects. This approach is supported by the literature (Callaghan, 2000;

Glover, 2001) in which exercises were identified as being pivotal to the development of young voices by providing improved vocal efficiency and vocal conditioning (Thurman et al., 2000b, p. 789). However, Welch (1986, p. 301) suggests that in order to accurately determine the technical 'needs' of a student, a teacher must first acknowledge the student's current skill level. In light of this, it is concerning to note that only three of the participants considered the skill level of the student when tailoring warmups/exercises. In addition, only two participants considered the level of difficulty as being an important factor when tailoring exercises.

Furthermore, the literature identified that the physiological and cognitive variations stemming from age and gender may also significantly influence the needs of the student (Welch, 2000, p. 704). Despite this, only three participants considered the age of the student when tailoring exercises. However, seven of the participants reported adapting vocal exercises when teaching young males undergoing voice change. One suggestion for these conflicting findings could be that the participants were more aware of vocal changes and range fluctuations of male changing voices than they were of students in other stages of vocal development, due to the significant observable change in vocal quality.

This finding raises two concerns. The first is that some participants may be inaccurately assessing the needs of the student in relation to their current position on the developmental continuum and their current phase of vocal development. For example, a teacher may inaccurately interpret a female student's increased breathiness in the upper vocal range as being the result of inadequate breath support, when it may actually be influenced by the student's age and their transition into the adolescent voice change phase as outlined in Gackle's model (1991, 2000b). An implication of this concern is that some participants may misalign exercises and student capabilities. This may, in turn, result in a retrograde movement along the vocal development continuum. Therefore, professional development opportunities on vocal development, especially in regard to age and gender, should be availed by singing teachers to ensure adequate knowledge is applied at all stages of the teaching process.

The second concern relates to the selection and application of exercises. This concern is based on the findings that a majority of the participants sourced exercises that they had gained from previous singing teachers, and applied these to their current students. The results identified a concerning example of this, with one participant using recorded exercises used in relation to their own singing development obtained from their previous singing teacher over a decade ago, as the basis of the regular warmup routine offered to their current students. Furthermore, no participants mentioned the use of cooldown exercises.

Repertoire

Repertoire was the second key area identified for adaptation. However, unlike exercises, in which the participant adapted to the 'needs' of the student, the results revealed that repertoire was instead most frequently tailored to the 'interest' of the student. Indeed, a majority of the participants (*n*=7) indicated that this was the main consideration when selecting repertoire. Furthermore, five of the participants indicated that they allowed their students to guide the repertoire studied. This approach is supported by the literature, which highlights that selecting repertoire that is meaningful and relevant to the student is an important contributor to young vocal development as it promotes motivation and continued involvement in the craft of singing (Gackle, 2000b). However, the appropriateness of this approach needs to be considered. As Sell (2005) notes, the musical preferences of young students are typically guided by social media outlets such as YouTube, Spotify, iTunes and even television shows such as X-Factor and Idol. Therefore, it may be assumed that a popular artist such as Beyoncé would likely be a preferred choice by the young female student. It also raises the question as to how do young students appreciate composers such as Bach?

The exposure to artists and repertoire with mass appeal raises two issues. The first is in regard to appropriateness. Commercial pop music usually deals with topics that are outside the life experience of most young students, raising questions as to the appropriateness of the text for the young student. There are also issues relating to mimicking adult voices and sounds. Chandler (2010) noted that commercial pop music often requires the application of a 'belting' technique. This technique requires the teacher to be able to facilitate a healthy belting technique as opposed to a technique with questionable suitability due to the degree of tension and sub-glottal pressure utilised.

The second issue focuses on the mismatch between achievability and capability. In the literature, Welch (1994) argues that the matching of the vocal task to the current capabilities of the student is pivotal in perpetuating positive vocal development. Furthermore, a misalignment of these two factors may potentially result in the presentation of a "(dis)ability" (Welch, 2000, p. 706). As noted in the discussion on vocal exercises, this requires an acknowledgment of the skill level, age, vocal range, and the level of difficulty in the repertoire being offered. However, the findings indicate that all of these factors were not a high priority for the participants when selecting repertoire, with only three of participants indicating that they considered the skill level of the student, and more alarmingly, only one participant considering the level of difficulty of the piece being offered. This finding suggests that some of the participants in this study may be placing the musical interests of the student

above their individual needs and capabilities, even if they question the effectiveness of this approach, as noted by Participant #3:

> …we're doing songs over there with kids that I wonder are too advanced… But they don't want to be doing anything that's age appropriate, it's not what they're listening to on the radio, so I figure that if I don't go with them, you're going to lose them as a student anyway.

Language

The third area of adaption focuses on the language used during a young student's vocal lesson. Indeed, all of the participants indicated that they altered their method of feedback when communicating with young students, with a simplification of language noted as the most frequent strategy. This approach largely focused on participants concentrating on the 'what' or 'how' their students were singing, rather than explaining aspects in relation to 'why'. To elaborate, participants indicated that they would generally concentrate on asking the younger student what they were feeling, or what they thought of the sound, rather than offering explanations as to the underlying process. Not wanting to confuse or bore the student with too much information, and a fear of the student overanalysing a concept, were two reasons offered to explain this approach. This method is largely consistent with the literature, which reiterates the need for language to be clear and appropriate to the age and knowledge level of the student (Sell, 2005) for enhanced student understanding (Welch, 2000).

While the literature confirms the need for language to be clear and appropriate to the age and knowledge level of the student (Sell, 2005; Welch, 2000), it also suggests that explanations of vocal functioning should be provided to the student regardless of their age, in order to promote greater understanding (Welch, 2000, p. 714), and, "acceptance of individual differences in skills" (Langness, 2000, p. 805).

The literature also comments on the use of imagery as an effective communication tool, especially for younger students who may have rudimentary musical knowledge (Langness, 2000). However, it is interesting to note that none of the participants commented on using imagery within their teaching. One explanation for this anomaly could be that the participants were questioned more broadly on the feedback methods used during the lesson and not directly questioned on their use of imagery. The use of direct observations of the singing lesson, similar to the study by Chen (2006), would provide further information into whether this technique was more widely applied.

Emergent Theme 2: Creating an independent learner (Guidance)

Creating an independent learner is the second emergent theme identified from the results. The section above has already discussed the importance of quality teacher feedback. However, student feedback has also been identified as being an important contributor to the developmental process (Thurman, 2000b). In order to promote student feedback, the participants noted that they frequently used student-led questioning during the lessons. Verbal prompts including, 'what', 'how' and 'why' were identified as being used to gather kinaesthetic and perceptual information on what the student was feeling or sensing whilst singing. This is highlighted by the following quotations by participants:

> I'm trying to reinforce as much as possible what they're feeling by asking, "Can you feel the difference here?" (Participant #4)

> During the lessons, I often ask them what they are sensing or feeling physically. (Participant #5)

> I'm constantly saying, "No, don't tell me what you thought of your singing, tell me what you feel". (Participant #8)

Indeed, the literature strongly supports the use of student-led questioning, confirming that it promotes self-awareness through physical experience (Thurman, 2000b), as well as critical thinking and listening skills (Sell, 2005). It also strongly echoes the importance of the body-mind connection advocated by many researchers (e.g., Callaghan, 2014; Dayme, 2006; Thurman & Welch, 2000a). This questioning technique also provides valuable information to the teacher on the degree and level of understanding to which a student is practically applying concepts. Prewitt (2013) notes that student-led questioning enables the teacher to provide targeted feedback on specific areas resulting in, "more effective self-guided student practice" (p. 62).

However, although the benefits of student-led questioning are acknowledged, the researcher has two concerns regarding its broad application in the singing studio. The first concern is that this questioning technique may fall outside the physical level of experience and cognitive capabilities of some students. These students may be readily identified as beginner and/or pre-adolescent students who are at the beginning of their singing journey, a journey that Welch (2006) identifies as a lifelong process. The second concern relates to Welch (1986) who notes that each student's vocal development path is unique and non-linear. Therefore, a student who has been learning singing for some time may be able to adequately respond to this type of questioning, while others may still be in the process of developing their kinaesthetic

awareness. This may potentially lead to the student telling the teacher what they 'expect' them to hear, rather than what they are actually feeling.

Arming students with a knowledge of their vocal mechanism and functioning was a further method employed by the participants in order to facilitate student independence. This approach is again strongly supported by the literature, which acknowledges the link between efficient vocal production and a scientifically grounded teaching philosophy (Callaghan, 2014; Thurman & Welch, 2000a). Indeed, a majority of the participants noted that they used voice science to explain concepts to their students, with a similar number confirming the importance of singing teachers having an understanding of voice science.

However, as Langness (2000, p. 805) notes, the quality of the information delivered is only as good as the quality of the knowledge of the teacher. When reflecting on the responses from the participants in regard to describing voice science, it becomes abundantly clear that there are varying levels of understanding. This was most poignantly noted in the inconsistency of the terminology used. One suggestion to explain this outcome could be based on the respective participant pedagogical background. Indeed, there was a strong correlation between an increased understanding of voice science in participants that had undertaken formal education including tertiary music and vocal pedagogy degrees, then in participants that had purely industry experience. Callaghan (2014) offers further support to this assumption, highlighting,

> Some of today's teachers of singing were trained as singers…the majority have never had formal training in singing pedagogy. In many cases, they see the physical skills of voice production as important, but because they see those skills in the context of musical imagination and whole-body use, they assume that these can be acquired through listening, observation, practice and coaching from and expert trained in the tradition. (p. 165)

Supplementary to verbal explanations, the participants also identified that technological forms of feedback were instrumental in facilitating independent learning, highlighting the benefits of the instant auditory or visual feedback provided. In addition, all participants noted that they used some form of technological method of feedback in their teaching, with digital audio recordings being used by a majority of the participants. However, upon closer analysis of the data, it appears that the role of technology in promoting independence is actually less significant. This point is most poignantly highlighted by the revelation that while six participants confirmed the use of digital audio recordings, these were primarily used for recording the lesson for upcoming student practice. In addition, the use of spectrographs and

video recording were confirmed as being used infrequently. Therefore, although the benefits to independence and positive vocal development from technology are well researched (Welch, 2000; Callaghan et.al, 2003; Welch et.al, 2005), it appears that the participants in this study may be misinterpreting or limiting the role of technology in providing quality feedback.

Emergent Theme 3: Establishing a safe learning environment (Support)

The final theme to emerge from the study is the participants desire to create a safe and supporting learning environment for the young student. The findings identified a number of ways this was achieved. The first was through the creation of a positive teacher-student relationship. Participants expressed that getting to know and understand the student aided in creating stronger relational ties. In addition, through the engagement of regular conversation concerning friends and family, the participants noted that they were able to create a trusted, ethical relationship with the student. This finding strongly correlates to the literature, which highlights the importance of the teacher-student relationship in harbouring trust and support (Brand, 2016; Welch, 2000). The literature also raises the ethical considerations of the teacher-student relationship and the need for professionalism to be maintained (Sell, 2005). However, this study found that a majority of the participants, whilst being friendly to their students, were very conscious of the ethical boundaries between teacher and student.

The second method used to create a safe and supportive learning environment was through the use of positive praise. Indeed, all of the participants indicated that they used positive praise as one of their main methods of feedback during the lesson. This finding raises concerns into the quality of the feedback that the participants are providing their students (Welch, 2000), given that previous research has highlighted the ineffectiveness of 'norm-referenced' feedback in promoting positive vocal development (Langness, 2000; Schmidt, 1995). However, if praise feedback were balanced with constructive developmental feedback, then perhaps it would better promote positive vocal development.

The findings also revealed that all of the participants acknowledged the need to provide extra encouragement and support to young adolescent males and females undergoing voice change. This point is reinforced by the literature which identifies the intrinsic nature of the body, mind and identity in singing (Thurman & Welch, 2000a; Brand, 2016), and the importance of the teachers role in promoting an environment that nurtures the self-image and self-esteem of the male student (Gackle, 2006; Greenstein, 2012; Harrison, 2006).

Conclusion

Chapter 5 began by discussing the three emergent themes from the data. These themes included adapting teaching strategies, creating an independent learner, and establishing a safe learning environment. The discussion highlighted several aspects of pedagogical practice such as vocal task selection and communication methods, raised concerns such as a mismatch between repertoire selection and achievability, and outlined perceived anomalies such as the effective use of technological feedback and imagery. The next chapter draws upon the cumulative findings of Chapters 4 and 5 in addressing the primary research question, 'what is the singing teachers role in the development of young voices?'. Chapter 6 also provides recommendations for effective teaching strategies that can implemented by the singing teacher as a result of the emergent themes as well as areas for future research.

CHAPTER 6: CONCLUSION AND FUTURE RESEARCH

Introduction

The aim of this research was to investigate the primary research question – What is the singing teachers role in the development of young voices? In order to facilitate this investigation, three sub-set research questions were devised:

1. What factors influence the development of young voices?
2. How do these factors influence the role of the singing teacher in regard to the development of young voices?
3. How important is the role of the singing teacher in the development of young voices?

Through the use of open-ended interview questions, nine singing teachers were questioned on the methods and considerations employed during the singing lesson in regard to the vocal development of young voices. The findings identified six pedagogical areas through which themes emerged. These themes included tailoring teaching strategies, creating an independent learner, and establishing a safe learning environment.

Accounting for the pedagogical areas and emergent themes, this chapter provides a model for addressing the primary research question of 'What is the singing teachers role in the development of young voices?'. The Vocal Development Model outlined in Chapter 3 (Figure 3.1, p. 26) is used to underpin this discussion. In determining the overarching model, this section initially and progressively addresses the sub-set research questions.

What factors influence the development of young voices?

The participant responses reveal that there are a number of factors that influence the vocal development of young voices. These factors have been linked back to the Vocal Development Model depicted in Chapter 3 and consist of three broad categories including communication, voice science and habitus. In addition, each of these categories influence both the teacher and the student respectively as shown in Figure 6.1.
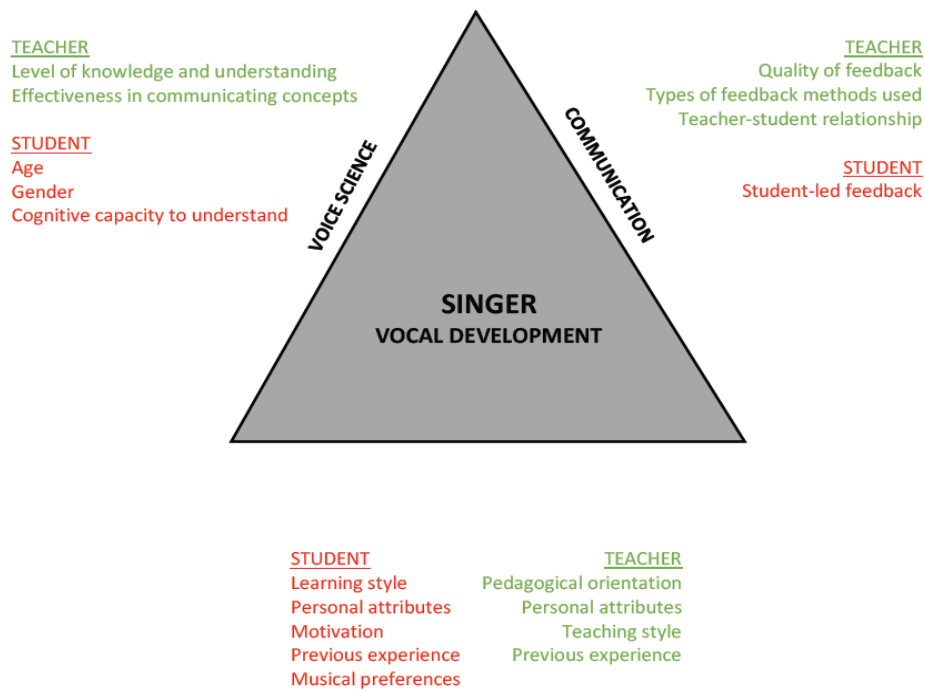
TEACHER
Level of knowledge and understanding
Effectiveness in communicating concepts

STUDENT
Age
Gender
Cognitive capacity to understand

VOICE SCIENCE

COMMUNICATION

TEACHER
Quality of feedback
Types of feedback methods used
Teacher-student relationship

STUDENT
Student-led feedback

SINGER
VOCAL DEVELOPMENT

STUDENT
Learning style
Personal attributes
Motivation
Previous experience
Musical preferences

TEACHER
Pedagogical orientation
Personal attributes
Teaching style
Previous experience

Figure 6.1: Factors influencing the development of young voices

The first category highlighted is communication. As evidenced by the responses from the participants and the literature, the type and quality of the feedback were both identified as key influences on young vocal development. Student-led feedback was also identified as an important contributing factor in identifying the current needs of the student and areas of difficulty which may be experienced. Communication was also identified as playing a key role in developing strong teacher-student relationships and building an environment of trust in which the student feels comfortable to experiment.

Voice science is the second factor influencing the development of young voices. Both the participant responses and literature revealed the importance of the teacher having an understanding of the vocal mechanism, and how factors including age and gender affect their capacity and functioning. In addition, the teachers effectiveness in communicating voice science concepts to their students based on the current cognitive and physical capabilities was also highlighted as being a key factor.

The third category focuses on 'habitus' which was defined as being a person's individual history in the Vocal Development Model (Figure 3.1). It was evident from the participant responses that previous teachers, further study, and personal drive were identified as the primary factors that influenced pedagogical orientation and methods (see Appendix D, Table 22, p. 90).

How do these factors influence the role of the singing teacher in regard to the development of young voices?

It is clear from findings of this study and as supported by the literature, that the three factors of communication, voice science and habitus all have the potential to either positively or negatively influence the development of young voices.

Indeed, the singing teacher has no direct control over the physical development of the vocal mechanism, or the age or gender of the student. However, by acknowledging both of these factors and recognising the inherit limitations they may contain, in conjunction with the current capabilities of the student, the singing teacher is able to adapt their pedagogical methods to cater to the student's individual needs. Likewise, the way the singing teacher communicates with the student, uses technological feedback, selects and applies appropriate vocal tasks, nurtures the teacher-student relationship and creates a safe and comfortable learning environment. Finally, previous learning and performing experiences influence the pedagogical approaches of the singing teacher. This was illustrated throughout the interviews in which the participants would often refer to factors such as previous health issues, previous singing teachers, and previous performing experiences as being the catalyst for the teaching methods that they currently employ. Although the identification of a participants specific pedagogical orientation as either traditional, mechanistic or holistic (see Chapter 2, p. 21) was beyond the scope of this discussion, by taking into consideration the ways in which participants altered feedback methods for young students (Appendix D, Table 14, p. 87), selected vocal exercises, and fostered the teacher/student relationship (Appendix D, Table 21, p. 90), the results suggest that the overall participant orientation may be viewed as more holistic. However, further research is required to determine the extent to which a particular pedagogical approach is influenced by individual cases.

As Figure 6.2 depicts, if the teacher is able to balance communication, voice science and habitus through constant reassessment of the student's needs and capabilities, positive vocal development can be achieved.
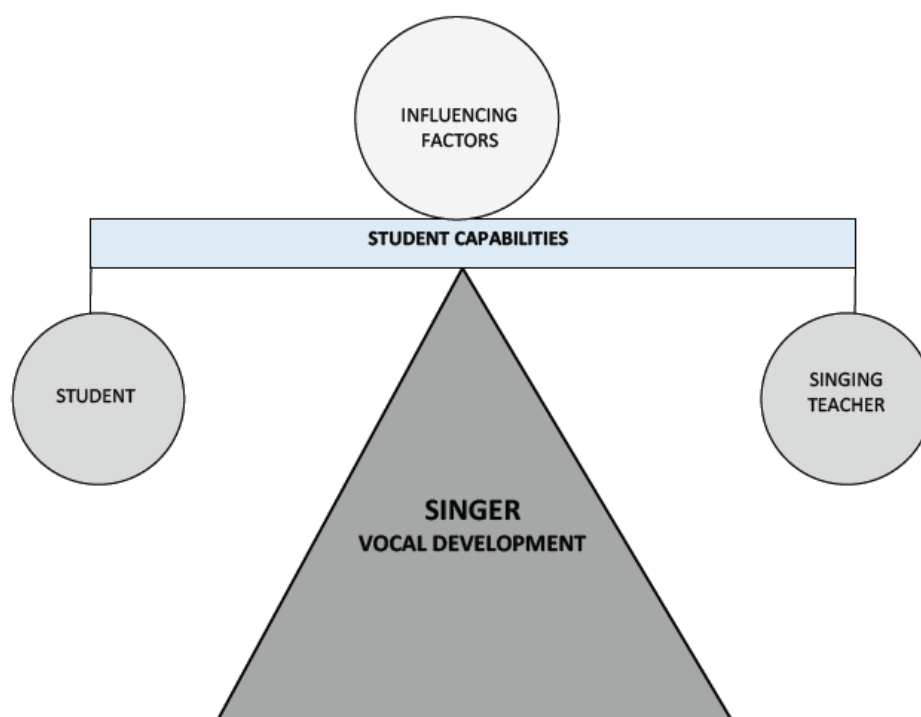
Figure 6.2: Factors influencing the role of the singing teacher

What is the singing teacher's role in the development of young voices?

In conjunction with the theoretical knowledge gathered from a review of the literature in
Chapter 2, and the emergent themes from the findings outlined in Chapters 4 and 5, six
functions of the singing teacher in regard to the development of young voices have been
formulated, and are depicted in Figure 6.3.

Figure 6.3: Six functions of the singing teacher.

Function 1: Ensure forward movement on the continuum of development

The first, and arguably the most important function of the singing teacher, is to ensure that students are continually moving forward on their continuum of development. Therefore, in this function, the singing teacher must acknowledge that the developmental path of each individual is as unique as the individual themselves. In turn, singing teachers need to utilise their knowledge and understanding of the voice and vocal development stages to accurately assess the capabilities of the student. By adopting this role, singing teachers can devise a broad learning plan for each student to guide them along their unique developmental path.

Function 2: Treat every student as an individual

The second role of the singing teacher to is acknowledge each and every student as an individual. Unlike Function 1, which takes a wide lens perspective of the student on the developmental continuum, this function narrows the spotlight to identify the unique characteristics of the student. This includes their learning style, personality traits, previous musical background, preferences, needs, wants and goals.

While the results of this study conclude that all of the participants identified the importance of recognising the student as an individual, many of the participants did this in a piecemeal fashion. For example, some participants noted the individual personality of the student while disregarding current skill level, while others focused on the technical needs of the student and disregarded learning styles. This is an important function, as it identifies the unique learning profile of the student. In turn, singing teachers are more accurately able to devise and implement specific teaching methods that are targeted to creating the most effective learning outcomes for the student.

Function 3: Understand voice science

The third function of the singing teacher is to obtain an understanding of voice science. While this study revealed that all of the participants could describe the broad concept of voice science, it was clear through the mixed use of terminology that the actual level of understanding was variable. Therefore, this function highlights the importance of the singing teacher gaining a grounded theoretical understanding (Thurman & Welch, 2000) of how the physiological aspects of the voice impact voice production and vocal efficiency. This function is of particular importance when teaching young students, as this is the period in which vocal growth occurs. Therefore, it is a recommendation of this study that all singing teachers avail themselves to the further study of voice science. This may include attendance at professional

development workshops or seminars, or reviewing relevant literature. Furthermore, this recommendation should not be restricted to singing teachers, but extend to all teachers that are responsible for the teaching of singing, including early childhood educators, primary and secondary teachers, and choral conductors.

Function 4: Construct appropriate learning opportunities

The forth function of the singing teacher is to construct meaningful, achievable learning opportunities through the selection of appropriate vocal exercises and repertoire. From the results of this study, it became apparent that many of the participants were disregarding the capabilities of the student, and instead allowing the musical interest of the student to guide the repertoire studied. Furthermore, the results revealed that the selection of exercises were largely implemented on a, "it worked for me, so it will work for them" mentality, through the implementation of exercises that were sourced from their previous learning experiences. Therefore, it is a general recommendation of this study that singing teachers need further education to clarify the technical purpose of each vocal warmup/exercise and how they contribute to targeting specific technical needs, as well as how and where to source appropriate exercises including cool down exercises.

This function is important when teaching young voices for a number of reasons. As a review of the developmental models by Cooksey and Gackle from the literature reveal, the ages of 8 to 21 are key formative years of the young voice. This, coupled with frequent structural and hormonal changes, makes this a turbulent phase for the young singer, both in terms of capabilities and self-awareness. Therefore, this role suggests that the singing teacher needs to constantly monitor and re-assess the needs and capabilities of their student in regard to their vocal and singing development on a regular basis. In doing so, the singing teacher is able to more accurately assign the student with vocal tasks that are in line with their current capabilities and needs, in turn promoting student motivation, confidence and a positive self-identity.

Function 5: Communicate effectively

The fifth function of the singing teacher to ensure that communication with the young student is clear, concise and understandable. This requires the singing teacher to reflect on the type and effectiveness of feedback methods used during the lesson, and how this corresponds to the student's current vocal and cognitive capabilities. Furthermore, the singing teacher may need to acknowledge that their preferred method of communication may not be appropriate for every student, prompting the investigation and implementation of alternatives.

Function 6: Develop meaningful partnerships

The final function highlights the importance of singing teachers developing meaningful connections with their students. This role acknowledges that the relationship between the singing teacher and the singing student is similar to that of a learning partnership. Both parties are emotionally invested in the process and outcomes of learning to sing. Both parties experience the highs and the lows that come with the learning process together. Furthermore, a successful relationship is one that is built on mutual trust, respect and understanding. Therefore, the creation of meaningful connections creates a positive learning environment in which the young student feels free to explore, experiment and sometimes fail without the fear of retribution or ridicule. This function is especially important when teaching young students, as their identity and self-esteem is closely linked to their voice.

In order to support the functions outlined above, a number of teaching strategies have been formulated, and are discussed below.

Teaching strategies

Teaching strategy 1: Teacher checklist

All of the functions identified in the research highlight the importance of the singing teacher understanding the stages, characteristics and limitations associated with the development of young voices. In response, a Teacher Checklist has been developed (see Appendix E). This checklist provides a summary of the key information presented in Cooksey (2000) and Gackle's (1991) adolescent voice change models, as well as providing a checklist focusing on the primary areas of the vocal task, including vocal exercises and repertoire selection, and feedback methods. In response to the time pressures that some singing teachers experience, this checklist is designed to be a quick and easy reference tool. It is recommended that the singing teacher regularly refers to a checklist such as this in response to changes in the

student's stage of development and subsequent needs. This checklist could be the focus of future study to test the efficacy of its practical implementation in the private singing studio.

Teaching strategy 2: Digital timeline recordings

An extension of the first recommendation would be to create a 'digital timeline', allowing the singing teacher to track individual student vocal development. This would involve recording digital audio of the student singing a combination of current exercises and repertoire at regular intervals (for example, every 10 weeks). Before each new recording is made, the teacher can replay the existing audio to the student. The audio can be used as an effective tool for prompting discussion on how the student has improved, or not improved, over a period of time, and what influences may have contributed to the outcome. The practical application and effectiveness of both of these recommendations could be an area of investigation for future study.

Teaching strategy 3: Student feedback worksheet

The focus of this strategy is to assist the singing teacher in obtaining information on the student, from the student's perspective. In response, a Student Feedback worksheet has been formulated, which would allow the student to reflect and respond to areas concerning the structure and delivery of their singing lessons, and their vocal development (see Appendix F). This worksheet may be distributed at the same frequency as the digital recordings as mentioned above. The practical application and effectiveness of this worksheet could also be an area of investigation in future study.

Teaching strategy 4: Tactile teaching aids

To assist in the effective communication of voice science concepts to the young student, singing teachers are encouraged to consider the use of tactile teaching aids to enhance student understanding. For example, balloons may be used to show the function of the lungs and breath support, or movable anatomy models to demonstrate the movement of the larynx, for example the Do-It-Yourself movable larynx model provided by Fisher (n.d).

Limitations and recommendations for future research

Two main limitations have been identified in this research, and include sampling limitations and data collection limitations.

This research was conducted as a requirement of the Master of Research degree. It was a second-year project in which eight months was allocated for completion. Therefore, in response to the time constraints posed by this timeline, the sampling of participants was restricted to nine interviews. In addition, the sample population was confined to the New South Wales area. Further research may seek to repeat the interview using more expanded participant parameters, including a larger and more diverse sample derived from other areas of Australia, to increase the generalisation of results. Further research may also seek to explore the teaching methods of online singing teachers to determine differences between teaching methods offered in the physical and virtual space.

A further limitation arising from the time constraints of this project was in the method of data collection. The focus of this exploratory study was to determine the perspectives and teaching methods of singing teachers. Although the open-ended interviews provided a strong platform in obtaining information, further research may seek to employ the use of lessons observations to determine if there is a discrepancy between the singing teachers' theoretical perspectives and practical applications. Repeating this research with the inclusion of lesson observations would also strengthen the results obtained through the means of triangulation (Patton, 2002, p. 247).

Future research may also seek to explore the singing teacher's role in the development of young voices from the perspective of the young vocal student. Although this would pose increased ethical considerations, this research could provide valuable information and validation into the efficacy of teaching methods.

Conclusion

This research highlights that the role of the modern day private singing teacher is indeed complex and multifaceted. Furthermore, responses from the participant interviews indicate that every teachers approach to vocal instruction is as unique as each individual the teacher. However, it is clear from this study that there can be no "one size fits all" (Bartlett, 2010, p. 227) when it comes to the teaching of singing. In fact, to make such a statement is impossible, as it fails to take into consideration the key influences of the student's current capabilities and needs, and the singing teacher's pedagogical approach.

Furthermore, the relevant literature and emergent themes from the interviews reveal that there is a marked difference between merely teaching to sing, and teaching for the development of young voices. Certainly, there is no one right way to teach, and even traditional teaching

methods may still yield positive vocal development, but at what cost to the student? No longer is it acceptable for singing teacher's to apply a blanket technique or adopt the attitude 'if it worked for me, it will work for them'. Failure of the singing teacher to acknowledge the individuality of the student and their position on the developmental continuum has the potential to delay vocal development. This discussion is timely given that the recent International Congress of Singing Teachers held in Stockholm this year included presentations on the development of young voices (e.g., McCann, Goffi-Fynn, & Graham, 2017).

In light of this, it seems appropriate to answer the final question posed by this research, '*How important is the role of the singing teacher in the development of young voices?'*. Indeed, it has become very clear from this research that the role of the singing teacher and the development of young voices are symbiotic in their relationship. Singing teachers need to be acutely aware that what they say, how they act, and most importantly, the tasks they provide, as all have the potential to either promote or hinder student movement along the developmental continuum (Welch, 2000). Singing teachers play a major role, not only in the way students engage in the task of singing, but also the way they feel about the craft of singing and about themselves. Indeed, this is a complex role, but certainly an achievable and fulfilling one.

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List of Appendices
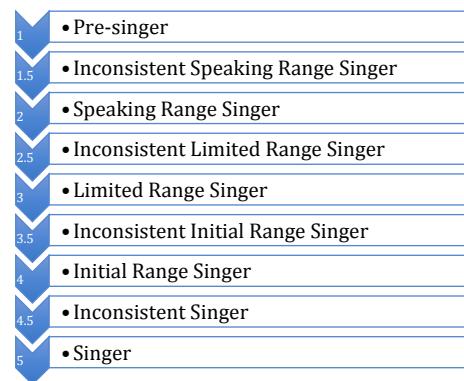
APPENDIX A: Voice developmental models

Figure 2.1: Rutkowski's Singing Voice Development Measure (adapted from Rutkowski, J. 1996, p. 365)
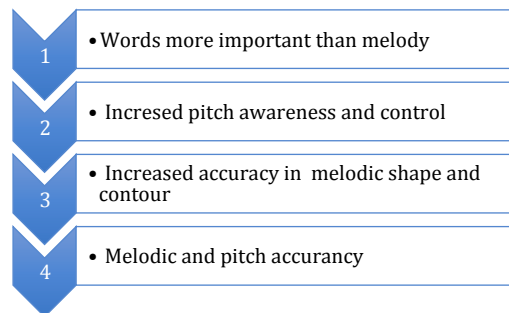

Figure 2.2: Welch's Vocal Pitch Matching Development Model (adapted from Welch, 2000, p. 705)

APPENDIX B: Participant Information and Consent Form

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Kelly Pecina
Master of Research Candidate

Associate Professor Diane Hughes
Candidate's Supervisor

Participant Information and Consent Form
Teacher - Interview

What is the singing teacher's role in the development of voices?

You are invited to participate in a study of singing teacher's and their role in the   development of voices. The purpose of the study is designed to explore what singing teachers 'do' in a singing lesson that may aid vocal development.

This research aims to give an insight into the use and impact of teaching practices employed in the vocal lesson on vocal development. The dissemination of teaching methods used by singing teachers aims to contribute to the body of knowledge in this field and address any lack of information that exists on teaching methodologies employed by the singing teacher. It also aims to provide a more specific definition of what is meant by the term 'vocal development', which could in turn benefit primary and secondary school curriculum design where singing is a focus, and future research projects.

This research is being conducted by Kelly Pecina (St.ID: 44738382) to meet the requirements of Master of Research under the supervision of Associate Professor Diane Hughes, (02) 9850 2175, diane.hughes@mq.edu.au of the Department of Media, Music, Communications and Cultural Studies (MMCCS).

Participant Criteria

In order to participate in this research, you must meet both of the following criteria:

> - have at least three year's voice teaching experience, and;
> - receive financial payment for the teaching of singing.

What is required

If you decide to participate, you will be asked to participate in a one-off interview at a date, time and venue that is both mutually agreeable to both the participant and the researcher. Venues may include Macquarie University, a local library or the participant teaching studio. Interviews may also be conducted via Skype/FaceTime or telephone at a date and time that is mutually agreeable to both the participant and the researcher. All interviews conducted via Skype/FaceTime or telephone will remain strictly confidential. The interview will take approximately 45-60 minutes. The interview will be recorded using digital recording devices (IPhone and computer).

Any information or personal details gathered in the course of the study are confidential, except as required by law. No individual will be identified in any publication of the results. Some direct quotations from the interview may be used, however no identifying data will be attached to the quote (e.g. Interviewee #). Only the researcher (Kelly Pecina) and supervisor (Associate Professor Diane Hughes) will have access to the recordings. All recordings will be deleted once the final thesis has been completed which will be mid-October 2017. A summary of the results of the data can be made available to you on request via email. Elements of the data gathered may be used in future post-graduate research.

I do not anticipate any risks to you participating in this research other than those encountered in day-to-day life. A reflective analysis of your teaching methods in the singing lesson may be one benefit of participating in this research. No remuneration or compensation will be paid for participating in this research.

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

If you have any questions or require further details, please feel free to contact Kelly Pecina: kelly.pecina@students.mq.edu.au.

Kelly Pecina
Master of Research Candidate, MMCCS, Macquarie University
_____

        I, _____ *(participant's name)* have read *(or, where appropriate, have had read to me)* and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

        Participant's Name:_____
        (Block letters)

        Participant's Signature: _____ Date:_____

        Investigator's Name:_____
        (Block letters)

Investigator's Signature: _____ ___ Date:_____

        The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

(INVESTIGATOR'S [OR PARTICIPANT'S] COPY)

APPENDIX C: Interview Schedule

Teacher background

1. What is your age?

2. What are your qualifications?

3. What is your singing experience?

4. How long have you been teaching singing for?

5. Do you teach from home, at a school environment or at a private music school?

6. What is your main form of teaching – one-on-one, groups, choirs?

7. What is the age range of your students?

8. What genders do you teach?

9. On average, how many students would you teach per week?

10. Do you accompany your students in the lesson or do you use musical recordings?

11. Do you participate in any professional development e.g. workshops/seminars? If so, what and how often?

Teaching Methods

i) Warm-ups

12. How do you structure a lesson – warmups / songs / aural / sight singing?

13. Do you perform vocal warm-ups in the lesson?

14. Do you tailor warm-ups to each student?
    - If so, what factors do you take into consideration when tailoring these for each student?

    - Do you use the same warm-ups for male and female students? Young students and adults? Depending on the repertoire that the student is learning?

15. Where do you source your warm-ups from?

16. In what ways do you feel vocal warm-ups contribute to vocal development of young voices?

17. How important do you think vocal warm-ups are in the development of young voices? Why?

ii) Repertoire Selection

18. What factors do you consider when choosing repertoire? (Key selection / genre / age / gender / student motivation?

19. Do you allow your students to guide the repertoire studied?

20. How important do you think repertoire selection is in developing young voices? In what ways?

iii) Pubescent students (male and female)

21. What teaching methods do you use when teaching a young male going through voice change?

22. Do you think that teaching methods need to be altered when teaching young pubescent males? Why or why not?

23. What teaching methods do you use on young female voices?

Performance Opportunities

24. Do you offer performance opportunities to your students (concerts / soirees / competitions)?

25. Do you think performance opportunities are important / beneficial to the development of young voices? Why or why not?

Feedback

26. What methods of feedback do you give to the student during the lesson? (verbal/written/constructive/positive praise)?

27. In what ways to do you feel feedback is effective / ineffective in the development of young voices?

28. Do you change the method of feedback to cater for young students? How and why?

29. Do you use technological forms of feedback during the lesson for example videoing or recording a student's singing?

30. Do you think recording (audio or visual) is an effective tool in vocal development? Why or why not?

31. Do you think that external feedback received from examinations, workshops, performances, master-classes are important in vocal development? Why or why not?

Relationship

32. What methods do you use to foster a positive teacher/student relationship?

33. How important is the teacher/student relationship in fostering vocal development?

Pedagogical approach

34. What factors shaped your teaching methods (prior singing experience/previous teachers/ workshops/tertiary study)?

35. What is your understanding of the term 'voice science'?

36. Do you think it is important to understand voice science to teach singing? Why or why not?

37. Do you use voice science to explain concepts to your students (e.g. breath control, phonation)?

38. In what ways do you think an understanding of voice science by the student would assist in the development of young voices?

Vocal Development

39. What is your understanding of the term 'vocal development'?

40. What factors, if any, do you think positively influence young vocal development?

41. What factors, if any, do you think hinder young vocal development?

APPENDIX D: Tabulated responses from interview questions

Table 1: Participant demographics

Demographic variables		N = 9
Age:	< 25	0
	25-40	4
	41-55	1
	56-70	3
	>70	1
Gender:	Female	9
	Male	0
Qualifications:	Industry experience	5
	Tertiary qualifications	5
	Certificates / Diplomas	2
Years Teaching:	3-9	1
	10-15	4
	16-20	4
Location of Teaching:	Home	7
	School / Tertiary	2
	Music school	4
Main form of teaching:	One-on-one	9
	Small groups	2
	Choirs	1
Age range of students:	<10	5
	11-20	8
	21-40	8
	41-60	5
	>60	2

Genders taught:	Female	9
	Male	9
No. private students taught / week:	1-14	3
	15-25	3
	26-35	2
	>36	1

Table 2: Factors considered when tailoring warmups – Q. 14

Considerations when tailoring warmups	Number of responses (N=8)
Individual technical needs	7
Linking to repertoire	4
Vocal range	4
Age	3
Gender	3
Skill level	3
Difficulty	2

Notes: (i) 9 Interviewees responded to this question out of an expected 9
(ii) 1 Interviewee did not provide enough information to allow classification
(iii) Multiple factors were recorded for some responses

Table 3: Warmup sources – Q. 15

Warmup sources	Number of responses (N=8)
Previous teachers	4
Online sources e.g. YouTube	3
Own creation	3
Books	2
Peers	2
AMEB (Australian Music Examinations Board)	1

Notes: (i) 8 Interviewees responded to this question out of an expected 9
(ii) Multiple components were recorded for some responses

Table 4: Ways in which warmups contribute to vocal development – Q. 16

Ways warm ups contribute to vocal development	Number of responses (N=9)
Building technique	7
Vocal health / hygiene	5
Building confidence	4
Allows for experimentation	2
Learning vocal limitations	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9
(ii) Multiple components were recorded for some responses

Table 5: Factors considered when choosing repertoire – Q. 18

Factors considered when choosing repertoire	Number of responses (N=9)
Student interest	4
Age	3
Appropriateness of text	3
Key	3
Skill level of the student	3
Targeting appropriate technique	2
Challenge	2
Preparing for exam / performance	2
Level of difficulty	1
Varied musical genres	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9
(ii) Multiple components were recorded for some responses

Table 6: Frequency of students allowed to guide repertoire – Q. 19

Allow students to guide repertoire?	Number of responses (N=9)
Yes	5
No	4

Notes: (i) 9 Interviewees responded to this question out of an expected 9

Table 7: Ways repertoire selection is important – Q. 20

Ways repertoire selection is important	Number of responses (N=9)
Building confidence through achievable repertoire	5
Reinforcing technique	4
Avoiding vocal damage	2
Variety	1
Developing a particular musical genre	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9
*   (ii) Multiple components were recorded for some responses*

Table 8: Teaching methods for young adolescent male – Q. 21

Methods used when teaching young male experiencing voice change	Number of responses (N=9)
Encouragement	9
Adapted technical exercises	7
Educate student on voice change	3
Adjust key	2
Patience	2
Group classes	1
Short lesson	1
Trial and error	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9
*   (ii) Multiple components were recorded for some responses*

Table 9: Whether teaching methods need to be altered for young adolescent males– Q. 22

Teaching methods need to be altered for pubescent males?	Number of responses (N=9)
Yes	5
No	4

Notes: (i) 9 Interviewees responded to this question out of an expected 9

Table 10: Teaching method young adolescent female– Q. 23

Teaching methods on young females	Number of responses (N=9)
Alter key	3
Exploratory vocal exercises	3
Softer singing	2
Keep lesson fun	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9

Table 11: Frequency of participants offering performance opportunities– Q. 24

Performance opportunities offered?	Number of responses (N=9)
Yes	9
No	0

Notes: (i) 9 Interviewees responded to this question out of an expected 9

Table 12: Ways performance opportunities are beneficial to vocal development – Q. 25

Ways performance opportunities are beneficial to vocal development	Number of responses (N=5)
Builds confidence	**2**
Builds performance skills	**2**
Encourages practice	1
Helps with performance anxiety	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9
(ii) 4 interviewees did not provide enough information relevant to the question
(iii) Multiple components were recorded for some responses

Table 13: Methods of feedback – Q. 26

Methods of Feedback used during lesson	Number of responses (N=9)
Technological feedback [1]	9
Positive praise	6
Verbal encouragement	6
Constructive criticism	4
Discussion	4
Mirror	4
Student-led feedback	4
Email	2
Explanations	2
Physical feedback [2]	2
Diagrams	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9
  (ii) Multiple components were recorded for some responses

[1]   Technological feedback includes digital audio recordings, video and spectrographs.

[2]   An example of physical feedback would be a student placing a finger on their chin to feel if the chin is rising, or the teacher placing their hand on the student's head to indicate if the head is tilting backwards*.*

Table 14: Frequency of participants that altered feedback methods for young students – Q. 28a

Change feedback methods for younger students	Number of responses (N=9)
Yes	9
No	0

Notes: (i) 9 Interviewees responded to this question out of an expected 9

Table 15: Ways feedback methods were altered– Q. 28b

Ways feedback methods are altered for young students	Number of responses (N=9)
Simplify language	5
More encouragement	3
Written notes	2
Limit explanations	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9
*   (ii) Multiple components were recorded for some responses*

Table 16: Technological forms of feedback– Q. 29

Technological forms of feedback used during lesson	Number of responses (N=9)
Digital audio recordings	6
Spectrographs	2
Video	2

Notes: (i) 9 Interviewees responded to this question out of an expected 9
*   (ii) Multiple components were recorded for some responses*

Table 17: Ways technological feedback is effective in vocal development – Q. 30

Ways technological feedback is effective in vocal development	Number of responses (N=9)
Allows student to hear / see	5
Objective	2
Allows for analysis / discussion	1
Greater understanding	1
Reflective tool	1
Reinforces concepts	1
Speeds development	1
Tracks timeline of development	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9
*   (ii) Multiple components were recorded for some responses*

Table 18: Perceptions on external feedback – Q. 32a

Is external feedback important in young vocal development?	Number of responses (N=8)
Yes and No	4
Yes	3
No	1

Notes: (i) 8 Interviewees responded to this question out of an expected 9
(ii) 1 interviewee did not give sufficient information to answer this question

Table 19: Ways external feedback is effective and ineffective – Q. 32b

Effective	Number of responses (N=7)	Ineffective	Number of responses (N=5)
Motivation	3	Subjective opinions	3
Setting benchmarks	2	One-dimensional interaction	1
Builds resilience	1	Only one person can win	1
Cross-check	1	Stifles confidence	1
Self-confidence	1		

Notes: (i) Multiple components were recorded for some responses

Table 20: Methods used to foster teacher-student relationship – Q. 33

Methods used to foster positive teacher-student relationship	Number of responses (N=8)
Friendly conversation	7
Become friends / family	4
Parental contact	2
Concerts	1
Hugging	1
Monthly newsletter	1

Notes: (i) 8 Interviewees responded to this question out of an expected 9
(ii) 1 interviewee did not provide enough information to allow for classification
(iii) Multiple components were recorded for some responses

Table 21: Ways teacher student relationship is important – Q. 34

Ways teacher / student relationship important	Number of responses (N=8)
Creating safe / comfortable environment	5
Building trust	2
Building student confidence	1
Instil a love for the craft of singing	1
Open to learning	1
Teachers opinion valued and respected	1

Notes: (i) 8 Interviewees responded to this question out of an expected 9
       (ii) 1 interviewee did not give enough information
       (iii) Multiple components were recorded for some responses

Table 22: Factors shaping teaching methods – Q. 35

Factors shaping teaching methods	Number of responses (N=9)
Previous teachers	7
Professional development/further study	6
Personal drive	5
Childhood musical experiences/involvement	4
Family	3
Passion for singing	3
Performance experiences	3
Previous health issues	2
Industry professionals	1
Listening to good singers	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9.
       (ii) Multiple components were recorded for some responses.
       (iii) Some responses to this question were gathered from information supplied in previous questions.

Table 23: Descriptions of voice science – Q. 37

Describe term 'voice science'	Number of responses (N=9)
Understanding the voice	7
Mechanics of the voice	6
Vocal anatomy	6

Notes: (i) 9 Interviewees responded to this question out of an expected 9
(iii) Multiple components were recorded for some responses

Table 24: Importance of voice science in teaching singing – Q. 38

Is external feedback important in young vocal development?	Number of responses (N=8)
Yes	7
No	1

Notes: (i) 8 Interviewees responded to this question out of an expected 9
(ii) 1 interviewee did not give sufficient information to answer this question

Table 25: Frequency of participant use of voice concepts for explanation – Qu. 39a

Use voice science to explain concepts?	Number of responses (N=9)
Yes	7
No	2

Notes: (i) 9 Interviewees responded to this question out of an expected 9

Table 26: Ways student understanding voice science assists development – Q. 40

Ways an understanding of voice science by student assists development	Number of responses (N=5)
Reinforces teaching concepts	4
Increased physiological awareness	3
Holistic approach	1
Separates mechanistic from imagery	1
Improved health / hygiene	1

Notes: (i) 7 Interviewees responded to this question out of an expected 9.
(ii) 2 interviewees did not respond as they did not use any voice science concepts.
(iii) 2 interviewees provided insufficient information to answer this question
(iv) Multiple components were recorded for some responses

Table 27: Responses for defining term 'vocal development' – Q. 42

Vocal development definitions	Number of responses (N=8)
Increased vocal strength	**4**
Overall vocal improvement over time	**4**
Pubertal changes	**3**
Increased vocal freedom	2
Increased vocal range	2
Understanding technique	2
Vocal control	1

Notes: (i) 8 Interviewees responded to this question out of an expected 9
(ii) 1 interviewee did not give enough information
(iii) Multiple components were recorded for some responses

Table 28: Factors identified as influencing young vocal development– Q. 43

Factors positively influencing young vocal development	Number of responses (N=8)
Support from friends/family	4
Good teacher	3
Teacher encouragement	3
Correct song selection	2
Strong teacher/student relationships	2
Creating a positive teaching environment	1
Performance opportunities	1
Varied musical exposure	1

Notes: (i) 8 Interviewees responded to this question out of an expected 9
(ii) 1 interviewee did not give enough information
(iii) Multiple components were recorded for some response

Table 29: Factors identified as negatively influencing young vocal development – Q. 44

Factors negatively influencing young vocal development	Number of responses (N=9)
Poor teaching	4
Student insecurities	4
Negative feedback	2
Pop music / TV shows	1

Notes: (i) 9 Interviewees responded to this question out of an expected 9.
(ii) Multiple components were recorded for some responses.

SINGING TEACHER CHECKLIST

Student: _____   Date: _____

Vocal Range: _____   Register transitions: _____

VOCAL EXERCISES

Developmental stage (refer to Guidelines over page) _____
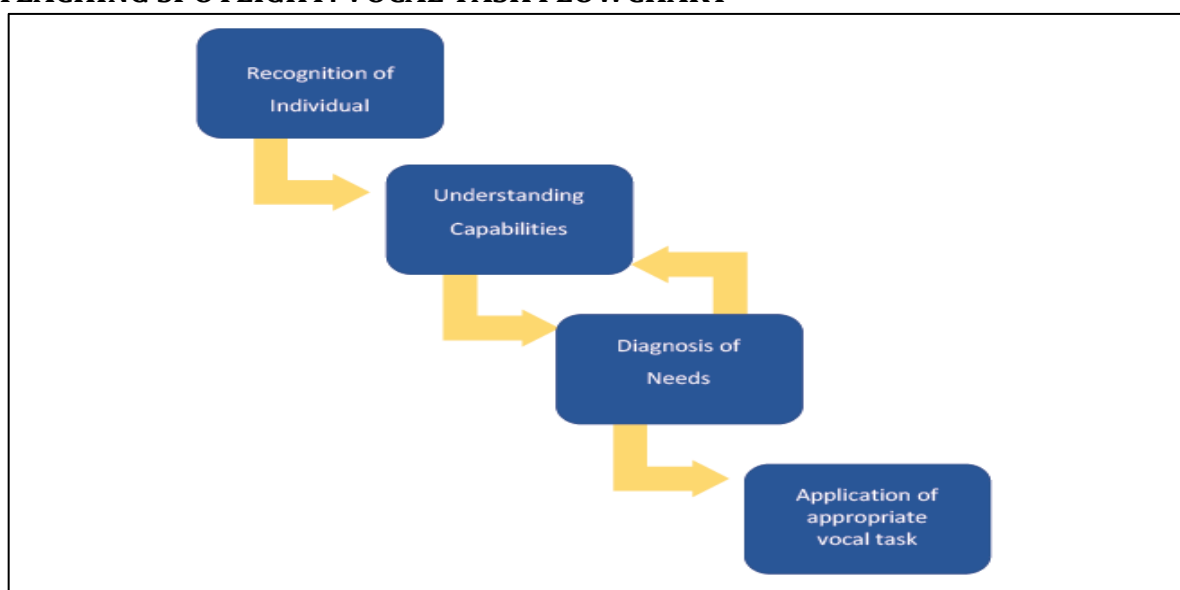
Current capabilities: _____

_____

Current technical needs: _____

_____

Vocal exercise: _____   Targeting: _____

Vocal exercise: _____   Targeting: _____

Vocal exercise: _____   Targeting: _____

TEACHING SPOTLIGHT: VOCAL TASK FLOWCHART
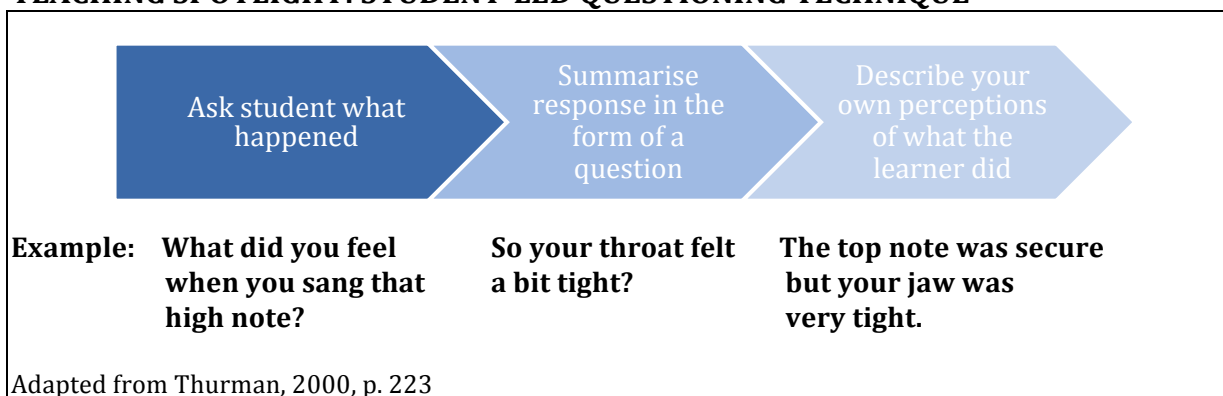
REPERTOIRE

Song: _____ Artist: _____

Vocal range: _____   Is this within capable range?   Yes / No

Key: _____   Has this been transposed?   Yes / No

Does the song contain extremes of register?   Yes / No

Does the song contain frequent sustained phrases? Yes / No

Is the text of the song age appropriate? Yes / No

Did the student enjoy the song? Yes / No

FEEDBACK

Feedback method: _____ Frequency: _____ Effective: Yes / No

Feedback method: _____ Frequency: _____ Effective: Yes / No

Models /diagrams used: _____ Effective: Yes / No

Technological feedback: _____Frequency: _____Effective: Yes / No

Do I solicit student feedback throughout the lesson?

Student feedback worksheet

TEACHING SPOTLIGHT: STUDENT-LED QUESTIONING TECHNIQUE

Ask student what happened	Summarise response in the form of a question	Describe your own perceptions of what the learner did

Example: **What did you feel**   **So your throat felt**   **The top note was secure**
            when you sang that   **a bit tight?**   **but your jaw was**
            high note?   **very tight.**

Adapted from Thurman, 2000, p. 223

APPENDIX F: Student Feedback Worksheet

STUDENT NAME: _____ DATE: _____

I like to sing because: _____
_____
_____

The things I like about my voice are: _____
_____
_____

The things I would like to improve: _____
_____
_____

I like listening to: _____
_____
_____

My goals for this term are: _____
_____
_____