

**A CASE STUDY OF CLASSICALLY TRAINED SINGERS IN POP
SINGING**

NORFAZRINA BINTI MOHD GANI

**FACULTY OF CREATIVE ARTS
UNIVERSITI MALAYA
KUALA LUMPUR
2020**

**A CASE STUDY OF CLASSICALLY TRAINED SINGERS IN POP
SINGING**

NORFAZRINA BINTI MOHD GANI

**DISSERTATION SUBMITTED IN PARTIAL FULLFILMENT OF THE
REQUIREMENTS FOR THE
DEGREE OF MASTER OF PERFORMING ARTS (MUSIC)**

**FACULTY OF CREATIVE ARTS
UNIVERSITI MALAYA
KUALA LUMPUR
2020**

**UNIVERSITY OF MALAYA
ORIGINAL LITERARY WORK DECLARATION**

Name of Candidate: NorFazrina Binti Mohd Gani

Matric No: 17027513/1

Programme: Master of Performing Arts (Music)

Title of Project Paper/Research Report/Dissertation/Thesis (“this Work”): **A Case Study of Classically Trained Singers in Pop Singing**

Field of Study: Music Education

I do solemnly and sincerely declare that:

- (1) I am the sole author/writer of this Work;
- (2) This Work is original;
- (3) Any use of any Work in which copyright exists was done by way of fair dealing and for permitted purposes and any excerpt or extract from, or reference to or reproduction of any copyright Work has been disclosed expressly and sufficiently and the title of the Work and its authorship have been acknowledged in this Work;
- (4) I do not have any actual knowledge nor do I ought reasonably to know that the making of this Work constitutes an infringement of any copyright work;
- (5) I hereby assign all and every rights in the copyright to this Work to the University of Malaya (“UM”), who henceforth shall be owner of the copyright in this Work and that any reproduction or use in any form or by any means whatsoever is prohibited without the written consent of UM having been first had and obtained;
- (6) I am fully aware that if in the course of making this Work I have infringed any copyright whether intentionally or otherwise, I may be subject to legal action or any other action as may be determined by UM.

Candidature’s Signature

Date: 28/10/2020

Subscribed and solemnly declared before,

Witness’s Signature Date:

Name:

Designation:

A CASE STUDY OF CLASSICALLY TRAINED SINGERS IN POP SINGING

ABSTRACT

In general, this study was conducted to discuss about a classically trained singers in pop singing among professional singers in Malaysia. Therefore, this study is limited only to classically trained singers in singing modern pop's genre based on vocal techniques and vocal health. The respondents consisted of 5 Malaysian singers who are well trained classically and have experienced in both education and music industry singing pop songs. As a classically trained singer, this study employed narrative inquiry focusing on their life experience using their vocal techniques that they have mastered and to prove that classically trained singers can deliver pop songs better than typical pop singers who are in the industry and at the same time they shared about how important vocal health in singing. The interview was approximately 60 minute each session which is to allow respondent rebuild and share their stories and experiences. Interview was audio-recorded and transcribed. Qualitative data was analysed, the respondents indicated that it is vital to take care of our health because without a good health, they will not going to be a great performance. Collectively, this study has acquire new knowledge that all aspects of vocal techniques and vocal health, A case study on the preparation of vocal warm up, the differences between classical and pop singers in terms of vocal techniques, and the relationship between vocal techniques and vocal health in terms of classical and pop singing is prepared.

Keywords: classical singing, pop singing, vocal health, vocal technique

ABSTRAK

Secara umumnya, kajian ini dilakukan untuk membincangkan mengenai penyanyi yang dilatih secara klasikal dalam nyanyian pop di kalangan penyanyi profesional di Malaysia. Oleh itu, kajian ini hanya terhad kepada penyanyi yang dilatih secara klasikal dalam menyanyikan genre pop moden berdasarkan teknik vokal dan kesihatan vokal. Responden terdiri daripada 5 penyanyi Malaysia yang terlatih secara klasikal, berpengalaman dalam industri muzik serta pendidikan dalam menyanyikan lagu-lagu pop. Sebagai penyanyi yang dilatih secara klasikal, kajian ini menggunakan penyelidikan naratif yang memfokuskan pada pengalaman hidup mereka menggunakan teknik vokal yang mereka kuasai dan untuk membuktikan bahawa penyanyi yang dilatih secara klasikal dapat menyampaikan lagu-lagu pop dengan lebih baik daripada penyanyi pop biasa yang berada di industri dan berkongsi mengenai betapa pentingnya kesihatan vokal dalam nyanyian. Temu ramah sekitar 60 minit setiap sesi untuk membolehkan responden berkongsi cerita dan pengalaman mereka. Temu ramah dirakam menggunakan audio dan di transkrip. Data kualitatif dianalisis, responden menunjukkan bahawa pentingnya untuk menjaga kesihatan kita kerana tanpa kesihatan yang baik, mereka tidak akan mencapai prestasi yang baik. Secara kolektifnya, kajian ini telah memperoleh pengetahuan baru bahawa semua aspek teknik vokal dan kesihatan vokal, Kajian kes mengenai penyediaan pemanasan vokal, perbezaan antara penyanyi klasik dan pop dari segi teknik vokal, dan hubungan antara teknik vokal dan kesihatan vokal dari segi nyanyian klasikal dan pop disediakan.

Kata kunci: nyanyian klasikal, nyanyian pop, kesihatan vokal, teknik vokal

ACKNOWLEDGEMENT

Bismillahirrahmanirrahim,

Alhamdulillah, I am fortunate and have benefited from the support and advice of the following person who contributed to a variety of materials for inclusion in the thesis. Firstly, I would like to express my sincere appreciation to Dr. Cheong Ku Wing, an estimable supervisor who provides me thoughtful encouragement, being supportive and valuable guidance that have broadened my visions. Thank you Dr. Cheong Ku Wing for always allowing me to benefit from her wisdom and kindness as well as challenged me to think in different ways to help clarify my writing. This thesis could not be completed by your helps in term of your guidance, approval, information, collaboration, kind concern and consideration. I also would like to thank other lecturers who have helped me Dr. Yap Jin Hin, for their guidance and their opinions on my research.

Secondly, this thesis will not been possible without the guidance and helps of several individuals. I would like to give a special thanks to my parents, Mohd Gani Bin Mod Arshad and Humayah Bt Sudarman for all the support in terms of financial, motivation, and unconditional love. Not to forget my siblings who has supported and giving me confidence along the way of completion this thesis.

Last but not least, my heartfelt gratitude to all my respondents, Ernie Zakri, Asmidar Ahmad, Fitri Hiswady, Azizul Hakim and Mrs. Dia Fadilla who are willing to spend their free time answering my interview sessions helps me to combine all the answer for my research questions. Only Allah S.W.T could repay all the kindness you have treated me.

Table of Contents

LITERARY WORK DECLARATION	i
ABSTRACT	ii
ABSTRAK	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
CHAPTER 1	1
INTRODUCTION	1
1.1 Background	1
1.2 Statement of the problem	4
1.3 Purpose of the Study	5
1.4 Research Questions	6
1.5 Significance of the Study	6
1.6 Delimitations of the Study	7
1.7 Definition of Terms	7
1.7.1 Classical singer	7
1.7.2 Popular singer	8
1.7.3 Vocal Techniques	8
1.7.4 Vocal Health	8
1.8 Conclusion	9
CHAPTER 2	10
LITERATURE REVIEW.....	10
2.1 Introduction	10
2.2 The Classical Singing Techniques	12
2.3 The Popular Singing Techniques	17
2.4 Vocal Use	19
2.5 Vocal Health among General Public.....	20
2.6 Vocal Health in Classical Singing	23

2.7 Vocal Health in Pop Singing.....	24
2.8 Conclusion	25
CHAPTER 3	26
METHODOLOGY	26
3.1 Overview	26
3.2 Research Method	26
3.3 Research Design	27
3.4 Data collection Procedure.....	28
3.4.1 Interviews	28
3.4.2 Sampling Procedure and Participants.....	30
3.4.3 Interviewing Procedure	31
3.5 Data Analysis Procedure	32
3.6 Guidelines for Coding and Category	34
3.7 Conclusion	37
CHAPTER 4	38
DATA ANALYSIS AND FINDINGS	38
4.1 Overview	38
4.2 Findings of the Study	39
4.3 Vocal Techniques	39
4.3.1 Warm Up	41
4.3.1.1 Proper Warm Up	43
4.3.1.2 Misuse of Warm Up.....	49
4.4 Vocal Techniques	51
4.4.1 Articulation	52
4.4.2 Tone.....	54
4.4.3 Placement	56
4.4.4 Transition	57
4.4.5 Breathing	59
4.5 Vocal Health	62

4.5.1 Vocal Hygiene	62
4.5.2 Environment.....	64
4.5.3 Food Consumption	66
4.5.4 Medicine	68
4.5.5 Vocal Disorder	71
4.5.6 Vocal Misuse	73
4.6 Relationship between Vocal Health & Vocal Techniques	74
CHAPTER 5	77
DISCUSSION, IMPLICATION, AND RECOMMENDATIONS	77
5.1 Overview	77
5.2 Summary of the Results.....	77
5.3 Discussion of Findings	78
5.3.1 Preparation of Warm Up	78
5.3.1.1 Posture and Alignment	79
5.3.1.2 Breathing and Support	79
5.3.1.3 Tone.....	80
5.3.1.4 Diction.....	80
5.3.1.5 Belting.....	80
5.3.2 Vocal Techniques	81
5.3.3 Relationship between Vocal Techniques and Vocal Health	82
5.3.3.1 Vocal Techniques	83
5.3.3.2 Vocal Health	83
5.4 Conclusion	83
5.5 Implications of the Study	84
5.6 Recommendation for Future Study	85
5.7 Closing Remarks	85
REFERENCE	87
APPENDIX A	93

CHAPTER 1

INTRODUCTION

1.1 Background

Singing as an art generally refers to the production of sounds similar to the articulation of speech using the voice as a tool but with musical tonality, rhythm, and employs various vocal techniques. Voice is acknowledged to be a speaking and musical instrument of natural endowment which can be traced from ancient time.

From the perspective of music education, singing is one of the most spontaneous ways to participate in musical activities. There are many music curriculums for early childhood that based on singing first; for example, Kodaly, Curwen, and Yamaha Music Education System. Generally, for those who do not have musical background, they experience singing in their daily life and in adulthood through singing karaoke or competing in singing reality shows while for some, they experience music in the highbrow musical culture in art music like operas and classical performance.

From the history of Western music, Gregorian chant was considered as one of the earliest performance practice which was originated by the Frankish cantors in the Carolingian period. This chant was the revision of the Roman ecclesiastical songs and later was sung with the diocese of Milan (Sadie & Tyrrell, 2001). The Gregorian chant remains as the central tradition for church music (Barnett, 1979) and deviated during the Baroque period; but with a sudden revival by the Catholic Church dominated by the Anglo people in the 19th century (Randel, 1986).

As part of art music, classical music and the traditions of Western music can be traced back to history which includes the spiritual music that was transcribed during the mid-17th to early 18th century. During the Classical era, similar to its previous ancestor,

the Baroque period, composers used the same available requirements to specify the performance direction to the performers in terms of dynamics, range, rhythmic and harmony in their composition.

Classical music is well known for its complex song form and its instrumental arrangement which varied and organised into these categories as follow: (1) concerto; (2) symphony; (3) sonata; (4) mixed vocal; (5) opera; and (6) church music. From the historical account, bel canto, a distinct operatic singing technique emerged and evolved in mid-19th century (Parker, 2001). Bel canto originated from Italy which was generally known throughout Europe from the 18th century until early 19th century. Historians and researchers agreed that the elegance and refinement of bel canto is based on its exquisite and consistency of the following: (1) tone; (2) legato; (3) phrasing; and (4) skill in performance (Toft, 2013).

Opera is a combination of singing performance and stage acting in conventional ways which has various sub-genres as the following: (1) opera seria; (2) opera buffa; and (3) tragédie en musique. There is a combination of music and comedy exists in operetta and Singspiel, a German light opera. The history of spoken drama is inextricably intertwined with the history of the opera (Sadie & Tyrrell, 2001).

Popular music as music genre generally refers to any musical genre that is topping the chart or influencing a certain culture. The term popular music was first used in the United States of America and the United Kingdom during the mid-1950s. According to Vennard (1967), popular music or pop music is similar and used interchangeably until the late 1960s, when they gradually used in different identity from one another.

Pop music generally is written as a basic song form which contains a verse and chorus structure with a constant of recurring choruses, melodic tunes, and a short melodic idea known as hook. According to Sadie and Tyrrell (2001), popular music is

defined as an “industrialisation” in the early 18th century which popularly perceived with the “perception and awareness of middle-class urban community” (p. 4370).

Vocal technique is the prime or the most important set of skills to a singer in the training of classical singing. In classical singing training, rigorous training is vital in preparation to obtain desirable music achievements. The classical singing techniques are divided into the following which involve: (1) forward tilted larynx; (2) projection of the voice; (3) vocal register; and (4) vocal masque; facial features. A stellar vocal sound could be achieved by singer through the resonating sound from the back of their eyes, and through their nasal passages. Sell (2003) in her doctoral dissertation on vocal pedagogy listed various strategies on how sound production can be achieved its full resonance within these cavities in classical singing techniques. These strategies included the appropriate support of the diaphragm, relaxed tongue muscles and the proper positioning of the palates.

Similarly, pop singing also requires professional training as in classical music. However, the process is varied from classical singing but in a simpler song form, where described as predictable, repeatable, and can be taught in a uniform manner. Therefore, in order to be a successful pop singer, one should learn to apply the correct breathing for muscular control, phonation, resonance, and articulation. Titze (2008) stated that popular music also elaborated the singing in the form of teaching and guidance on the importance of vocal techniques and its function.

It is vital for singers to sing in proper techniques to ensure the quality of voice and beautiful singing. Typical areas of study include: (1) breathing and air support for singing; (2) posture for singing; (3) phonation; (4) vocal resonance or voice projection; (5) diction; (6) articulation; and (7) vocal registration among many more. Nevertheless, technique is not the only means to exhibit musical interpretation, but compliment with expression to convey musical message.

Vocal use refers to the vocal disorders or misused of the vocal cord which are a global health problem that has been identified where sometimes, singers are not taking care of their vocals very seriously based on the feeding and care of the voice thought process. In order for the singers to maintain their tremendous voice, they need to improve the health of their larynx through voice therapy and have a proper schedule on daily activities to prevent the lack of sleep or over slept so that our body can maintain its health (Parker & Parker, 2002, p. 11). There are several causes of voice disorder that can be found for example in vocal misuse if the singer is over using their voices, it can cause injury to the larynx which if it is not treated properly it might lead to serious vocal damage such as vocal fold lesions.

Vocal misuse commonly refers to the following: (1) yelling; (2) screaming; (3) hollering; including cheerleading, throat clearing and coughing; (4) loud talking; (5) whispering; (6) singing without any proper singing practices. According to Catharine (2000) vocal overuse can occurs when one is over using their voices and gets tired from doing so could increase the chance of injury to the vocal fold as, the best one could do to avoid irregularities and by sticking to the familiar and known work techniques (p. 208).

Therefore, based from the discussion and descriptions above, this study aims to investigate the perceptions from the classical singers who are also singing pop songs in terms of the vocal techniques and vocal health.

1.2 Statement of the Problem

Based on the literature review on the purpose of study and the researcher previous experiences, there is a concern on the misuse of vocal technique and vocal health which will affect the quality of singing the modern style of pop singing's genre for classically trained singers and vice versa for pop singers singing classical singing's genre.

In the Malaysian context, there are a lot of vocal graduates who have the ability and calibre to sing but most of them generally faced challenges in the industry because certain vocal issues that could not be solved. For example, nowadays music industry depends highly on physical features instead of vocal skills. Besides, in the perspectives of music business, networking and internal connection is needed for a singer to make it through. Otherwise, the novice singers will only sing either as backup vocals or demo artist. Further, these novice singers generally no longer take heed on vocal warm up and vocal health.

Therefore, the study aims to investigate the treatment of vocal technique in classical singers singing pop songs among the professional singers in Malaysia. There are some of professional singers in the industry who are well trained classically, the researcher intends to in seek knowledge of the differences in vocal techniques and vocal health among the classical and pop singers.

This study intends to investigate the following issues: (1) the preparation of warm up between classical singers and non-classical singers; (2) the comparison of vocal techniques between classical singing and pop singing; and (3) the relationship between vocal health and vocal technique in classical and pop singing. There are limit studies conducted in these areas, especially concerning the popular singers in Malaysia.

1.3 Purpose of the Study

The purpose of study is based on the discussion of problem statement:

1. To investigate the difference in preparation of warm up between classically trained singers and non-classically trained singers.
2. To investigate the difference in terms of vocal techniques in comparison between classical singing and pop singing.

3. To describe the relationship between vocal health and vocal technique in terms of:
(a) classical singing; and (b) pop singing

1.4 Research Questions

This study is to investigate the treatment of vocal techniques for classical trained singers singing pop song. Research questions were constructed to seek specific and explicit answers from the research outcomes. The following are the research questions that directed the study:

1. What are the differences in preparation of warm up between classically trained singers and popular trained singers?
2. What are the differences in terms of vocal technique in comparison between classical singing and pop singing?
3. What are the relationships between vocal health and vocal technique in terms of: (a) classical singing; and (b) pop singing

1.5 Significance of the Study

This study focusses on professional singers in Malaysia in which their performance quality is much acknowledged. This study aims to contribute to new knowledge towards understanding the use of different vocal techniques used by classically trained singers and pop singers.

All professional classical and pop singers aim to strive for excellence. However, professional singers also encounter a voice technique problem. It is essential to have knowledge regarding the ways to maintain and improve the quality which requires good

and sustainable techniques so that the vocal issues would not be repeated since both genres have their own technical and performance requirement for each style.

The findings of this study aim to provide knowledge for singers or future singers on the value and the importance of techniques in practice, and to develop singing skills.

1.6 Delimitations of the Study

This study is delimited to classical singer singing pop song on vocal techniques and vocal health. The delimitation also applies to the professional singers who are working in the industry; as the study focusing on singers with vast experiences in both teaching and performances. Only 5 classically trained singers in Malaysia are included as interviewees for this study. Lastly, this study focussing on vocal techniques and vocal health is delimited to qualitative descriptive study. The scientific use of endoscope medical treatment examining the vocal health is not included in this study.

1.7 Definition of Terms

The following presents the definition of terms for this study which includes: (1) classical singer; (2) popular singer; (3) vocal techniques; and (4) vocal health.

1.7.1 Classical singer

Classically trained refers to the ability of a musician who are a specialist in classical music. For classical singers, they are the one who have mastered or learned the precise techniques, which leads to artistry and the enlightenment of vocal projection. According to Fry, Ketteridge and Marshall (2009), they described that a classically trained is based

on a person educational process under the syllabus of the European educational levels. They also defined that classically trained can be achieved under the tutelage of a professional academia.

1.7.2 Popular singers

Popular singer is a term used to define an artist who has a hit song in the music industry. With the advancement of technology, anyone can be a popular singer. There are rock singers who used avant-garde approach or an experimental indication through their works where specific vocals and techniques are varied and in conflict to the classically trained methods. In this study, popular singers refer to the singers who sing in different feelings, character, technique, and able to connect with audience's soul with no limitations or boundaries because it is automatically creates a sense of familiarity for listeners.

1.7.3 Vocal techniques

Rosine (2018) refers vocal technique as particular types of practice methods that applied to the vocalist muscular control for the purpose of breathing, phonation, resonance, and articulation. In this study, vocal techniques refer to the followings: (1) posture and alignment; (2) breathing and support; (3) tone; (4) diction; (5) belting; and (6) vocal health.

1.7.4 Vocal health

By definition, vocal health is commonly known as problems that are focus on dynamics or the quality of vocals and pitch due to hygiene or any other mis-usage which can

attract the devotion to it rather than to what the speaker maxim. There are three specific categories that singers can follow in order to take care of their voices, starting with food supplements, resting and avoiding injuries to the throat. This is because as a vocalist, their instrument is naturally attached to them so in order to get a better result they need to take a good care of themselves.

1.8 Conclusion

Chapter 1 discussed the statement of problem, outlined the research objectives and research question, stated the significance of the study and the delimitation of the study, and concluded with the definition of terms.

Universiti Malaysia

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Singing is universal in all world cultures. We sing in various activities and settings to express our emotions. Singing as a performing art involves the technique of producing sound through the voice mechanism. Some singers were professionally trained to sing and to represent their emotions to achieve great excellence in beauty and sublimity through exemplary vocal techniques.

In the history of Western Classical music, singing is documented as norm practices in worships and singing in church through apprenticeship (O'Bryan & Harrison, 2014, p. 1). Later, singing is more accessible to the public other than just in religious settings. More singers were professionally trained to achieve great accomplishments in this performing art (O'Bryan & Harrison, 2014, p. 1).

The operatic tradition of vocal technique was developed during the 17th century in Italy. Italian vocal techniques are one of the most notable and famous styles that exist during the 17th and 18th century commonly used in opera. According to Toft (2013), this vocal technique known as the bel canto, represented by its elegance and beauty tone quality, legato and smooth phrasing, highly florid, ornamented and elaborated passages continues to flourish from the 19th and 20th century till today.

The importance of bel canto style remains a significant vocal training for modern operatic singers in the 21st century. It is also widely used in other singing styles with emulation and adaptation of the vocal techniques in jazz and pop singing (Pleasants, 1973). According to Pleasants (1973), the bel canto-infused vocal techniques produce the desirable effects in pop singing.

As stated by Sadie and Tyrell (2001) pop music refers to the basic song form which contains a verse and chorus structure (p. 4370). They also added that the common features like recurring choruses, melodic tunes, and melodic hooks allow the classical singers to improvise in appropriate applications.

In the Malaysian context, the history of pop music is known through its high notes. Basically, in order to hit the right high notes, a certain technique is needed. Generally, most pop vocalists in Malaysia are not classically trained or have limited knowledge in vocal pedagogy.

From the video master class by Aguilera (2018), she shares and recommends some instructions in vocal techniques and singing tips like exercises for warming up the voice. She suggested that to hit and sustain the high notes, singer needs to get practice their scales correctly without putting too much pressure on the scales or straining their voice. She emphasised that to hit high notes and maintain “better, stronger and more powerful” is the mind-sets that singers used to achieve a controlled execution of this vocal range. She also suggested other vocal training tips like visualisation, breathing, emotion, expression, and physical awareness.

Aguilera (2018) commented that the common issues that amateur or promising and rising singers often neglect and take warming up lightly without considering the consequences when not doing so. However, she also advised the singers to be attentive and not to overdo the warm up as it may strain the throat and vocal cords and caused vocal fatigue. She recommends the singers to be relaxed during the warm up sessions and other tips like to drink warm water, to rest the voice when felt vocal strain.

Aguilera (2018) indicated that as a singer, it is important to maintain optimal vocal health to protect their instrument, the voice. Thus, it is of utmost importance to take heed to avoid voice-damaging, such as “smoky, loud and stressful” environments.

The above briefly presents several nuts and bolts and the basics of vocal techniques and vocal health. The latter sections aim to provide relevant of background and literatures under the following headings: (1) classical singing; (2) pop singing; (3) vocal use; (4) vocal health; (5) comparison of a proper classical and pop techniques; and (6) relationship between vocal health and vocal techniques.

2.2 The Classical Singing Techniques

Good and proper vocal technique is vital to ensure a compelling musical performance. Hong-Young (2003) emphasised the importance of technique, as it “makes the difference between the professional and the amateur” (p. xvii) and she further suggests various basic techniques that are essential for good singing which included “proper posture, breath control, voice placement, registration, resonance, and projection” (p. xx). In her view, good technique begins with “proper posture” or also known as “body alignment” for the basis of breath support (p. xx). She explained that proper posture, breathing, voice placement, and registration have an effect on resonance, which contributes to the quality and volume of the voice (p. xx).

Grant (2014) also discussed the importance of posture and emphasised its importance on vocal freedom, especially in classical singing where resonance with “well-supported tone” with rich timbre enable the singers to sing with wide range of emotion and with clarity (p. 177).

Classical vocal pedagogy is rigorous with training. Mitchell (2014) stipulated criteria for voice quality assessment in classical vocal technique which include appropriate vibrato with colour and warmth, clear diction, range of dynamics, control and management of breath, achievement in the evenness of registration, flexibility and

freedom of the vocal range, intensity and intonation accuracy, legato and smooth melodic contour and resonance (p. 188).

The use of vibrato is one of the important components in the vocal performance practice. A controlled and natural vibrato is a vital quality of classical singing voice and a “natural part of healthy singing” (Elliott, 2006, p. 15). Elliott (2006) described vocal vibrato as the result of “air pressure flowing through the vocal tract” (p. 16) and it is one of the fundamental components of vocal training (Mitchell & Kenny, 2010) for the skills in vibrato to be accomplished, mastered and well-integrated into the singing.

Bel canto tradition of solo singing is the elegant and florid singing style in 18th and early 19th century Italy. From an Italian word, bel canto literally refers to “beautiful singing” and also other implications in the development in vocal history and vocal pedagogy. Stark (1999) refers bel canto as a vocal technique with diverse vocal “stylistic idioms” (p. xvii). Historically, it is a vocal practice and tradition which can be traced back to the rise and emergence of the virtuosic solo song and operatic singers in later 16th and early 17th centuries (Stark, 1999, p. xvii).

In addition, Jander (1980) indicated that bel canto was commonly referenced to vocal technique in the mid mid-nineteenth century and described it as “light, florid delivery” (p. 420) of vocal tone. Stark (1999) indicated that bel canto is broadly known as the “classically trained voice” (p. xx), a vocal technique for the operatic and concert singers with subtlety and refinement. Celani, Wolfe, and Marienfel (1998) referred Bel canto as “physical principle” in which the singers the “placement of the voice” for the “best place to amplify the voice” (p. 28).

As described by Stark (1999), the bel canto singing technique involves the subtle application of various muscles in the “laryngeal, respiratory, and articulatory” mechanisms (p. xx). This aims to achieve the subtle qualities in timbre, evenness of tone quality, breath management and control, flexibility in musical expression (p. xxi). Stark

(1999) also mentioned that this vocal technique differs from the “vernacular styles” of singing like popular and choir singing (p. xxi).

In sum, bel canto was developed during the 18th and early 19th centuries in Italy. This vocal style aims for the sublime of singing quality which is characterised with agility and flexibility in vocal production, evenness and smooth singing line, and elegant light tones in the higher registers.

Scholars described that in early 19th century the human voice comprises of three vocal registers, that is the low, middle, and high. The change from one register to another, where muscles made a positioning adjustment to shift into the next register; this is known as registration (Hong-Young, 2003, p. 32). It was further explained that the *passaggio* is the transition area where the register shifts from the middle, in between the registry of the upper body to the highest registry, which is the head register. It was indicated that all three registries required efficiently merged before completely poised. Additional, a novice vocalist might obtain a whole lot of expertise to his or her expected tool before they achieve this outcome assiduously.

Henrich (2006) discussed the notion of vocal registers and the discrepancies. She stated that though it has evolved over the decades, the singing voice community are still ambiguous of the registers and definition (p. 3). Though the definition and labelling of the vocal register is still under debate, Henrich (2006) defined the vocal register as a “series of consecutive tones produced by the same laryngeal mechanism” (p. 12). She further categorised the characteristics of the human voice into four different voice registers: (1) laryngeal registers such as Hollien’s pulse; (2) modal; (3) loft registers; and (4) whistle register (p. 12).

Previous studies shown that the vocalist’s formant by examined it. A comparative wonder delivered via prepared speakers drove a few creators to inspect the speaker's ring (Stegemöller, Skoe, Nicol, Warrier, & Kraus, 2008). On the off chance

that we consider these marvels as reverberation impacts related with vocal tract alterations and preparing, would we be able to speculate that prepared artists can continue their singing formant capacity into discourse, likewise getting a speaker's ring? Would we be able to discover comparable contrasts for vitality dispersion in constant discourse?

Forty classical trained vocalists and forty untrained typical speakers played out an all-voiced perusing assignment and created a specimen of a supported talked vowel/a/. The vocalists were likewise asked to play out a supported sung vowel/an/at an agreeable pitch. The perusing was examined by the long-term average spectrum (LTAS) technique. The managed vowels were breaking down through power range investigation. The information recommends that vocalists demonstrate more vitality focus in the artist's formant/speaker's ring area in both sung and talked vowels. The artists' talked vowel vitality in the speaker's ring zone was observed to be altogether bigger than that of the untrained speakers (Stegemöller, Skoe, Nicol, Warrier, & Kraus, 2008). The LTAS demonstrated comparable discoveries proposing that those distinctions additionally happen in nonstop discourse. These findings support the estimation of further research on how singing prepares the reverberation of the talking/speaking voice (Callinan-Robertson, Mitchell, & Kenny, 2006).

In this longitudinal examination, the researchers quantified vibrato rate (VR) and vibrato degree (VE) and consistency (SD) of VR and VE in understudy vocalists through the span of four semesters of tertiary level voice preparing at a conservatorium of music to decide how these parameters changed amid preparing. Fifteen vocalists finished four semesters (2 years) of preparing. Artists performed four managed pitches over their vocal range. Pinnacles and troughs of vibrato were segregated from the central recurrence follow to ascertain VR in hertz and VE in semitones (Mitchell & Kenny, 2010).

The investigation of utilising the direct blended models to uncover huge increments in VE declined in VRSD after some time. VR was inside expected cut-off points for established vocalists in all semesters, and little VR diminishments were not measurably huge between semesters more than 2 years of preparing. VE demonstrated critical increments between the beginning of year 1 and year 2. Periodicity of artists' VR (SD) enhanced over preparing, with critical abatements to VRSD after some time. There was no noteworthy change to VESD (Mitchell, Kenny, & Ryan, 2010).

Testosterone has been known to assume an imperative part in the improvement of the post pubertal male voice for a long time. Indeed, the anticipation of pubertal advancement of the voice by maiming youthful male artists was a notable practice, particularly in Italy starting in the sixteenth century (King, Ashby, & Nelson, 2001).

The "castrati" were outstanding for their reasonable, piercing voices. In light of the subsequent little larynx and vocal folds, castrati clearly delivered a particular reverberation and also the high pitch, which can't be coordinated even by the counter tenors of today. Occupied voice labs infrequently observe guys with sex hormone inadequacies auxiliary to chromosomal or gonadal issues (Cynx, Bean, & Rossman, 2005). This is an introduction of an outlandish patient who was a prepared tenor artist and was found to have hypogonadism on a premarital wellbeing examination. The organisation of substitution testosterone had brought about noteworthy vocal enlist and voice quality changes (King, Ashby, & Nelson, 2001).

The influence of opera in classical singing are very wide since the Bel canto styles became a part of the structure in classical singing techniques (Toft, 2013). Similar to opera, the Musical Broadway works in the same concept especially in shaping the structure of modern style of singing.

2.3 The Popular Singing Techniques

Chandler (2014) stated that popular music is an integral component of contemporary music and listed various styles including the generally known Rock, Soul, Dance, R&B, Funk, Reggae, Indie, Country, Folk and Metal. Further, from the vocal perspectives, these styles are characterised by the “speech-like” and “naturalistic sound” (p. 35).

Brown (1996) indicated that popular singers are different from classical singers where their voice as an instrument is diverse physically and approach different vocal techniques (p. 136). Chandler (2014) compared the difference between classical and contemporary singing and indicated that not all aspects in classical singing techniques are applicable to popular singing and suggested that pop singing pedagogy requires “specialised knowledge, training and competence” (p. 36). Specifically, for the “sung tone”, Chandler (2014) indicated that the contemporary singers used the ‘chest’ voice as compared to the classically trained singers who used “head voice” to produce “pure and trained tone” (p. 37). Musical theatre voice also emerged as a genre in contemporary singing, in which the sung tone has the quality of “belt’ and “legit” (Bourne, Garnier, & Kenny, 2011). They further explained that the vocal quality of “legit” is rooted in classical singing tradition from the early 20th century operetta and were popular in the musicals in the mid-century.

LoVetri and Weekly (2003) conducted a survey on music theatre instruction among 139 vocal teachers on their musical training and education, teaching experience and methods. The results indicated that only 45% of the respondents are professionally trained to teach musical theatre. Most respondents indicated that they have diminutive qualification in non-classical vocal training but received training through “workshops, seminars, non-credit courses, or private lesson” (p. 210); they also reported that most respondents acquire their professional knowledge in teaching music theatre through self-knowledge and experiential learning.

Since voice instructional method programs are for the most part under the locale of established voice offices, educators in-preparing are themselves traditionally arranged, and teaching method classes concentrate on traditional singing. Notwithstanding, numerous educators will instruct various understudies in the private studio who need to sing non-customary styles, for example, pop, jazz, and music theatre (Stokes, 2010).

Also, music theatre is a best in class field in schools and colleges. The expert association for voice instructors, the National Relationship of Educators of Singing, has perceived the developing prominence of music theatre singing, and it now supports a comparing class in numerous understudy rivalries. It is, along these lines, the duty of voice educators to teach themselves about non-classical singing (Bourne & Garnier, 2012).

There are several techniques that introduce the element of jazz style in voice. Rhythmic feel, song form, jazz harmony and improvisation are usually addressed. Jazz singer commonly adopt the syllabic language in jazz that has no literary meaning, which is called scat. The singers use different syllables to improvise on the melody which helps to sing a sound like many different types of instruments. Singer might use certain syllables to recreate a certain sound such as trombone sliding into a note, or get really low down of the note like a bass “*dum dum dum dum*”.

Irving Berlin presented a progression of tunes that numerous understood as jazz according to his four Music Box Revues (1921– 24) even though that the view has not won, but rather the jazz name turns out to be clearer through endeavours to re-establish its unique milieu, including the tune is particular melodic and etymological components, the showy setting, and the social discourse encompassing Berlin and his work in that period (Magee, 2012).

When the term jazz had just as of late entered open talk, and when its significance, substance, and esteem stayed in transition, Berlin conveyed an assortment of jazz and blues assumes that might be depicted as dark points, and consolidated them so as to deliver a jazz figure of speech, a melodic build made by comparing unique or even conflicting subjects. At the point when over and over again set to verses that celebrate illegal conduct, the music increases advance relationship with things that jazz was thought to abet (Hamberlin, 2011).

The dramatic setting additionally strengthened the tunes connects to jazz. A considerable lot of numbers was composed by Berlin for a flapper-style sister act which he regularly put and compare them in a climactic program position between the wistful and nostalgic tunes to symbolize the attractions of jazz (Hamberlin, 2011).

Everett and Laird (2009) stated that in reference to Berlin and George Gershwin, tunes and dramatic introduction distinguished Jewish Americans past the stage to thrive inside a rising viewpoint as a monumental moment particularly in melodic theatre and jazz which maintain a persuasive by uncovering the crossing point of: (1) melodic; (2) etymological; (3) dramatic; and (4) social components in the mid-20th century.

2.4 Vocal Use

Every human being is well designed with a natural endowment-the mouth. Our mouth is a God created instrument to serve the purpose of our daily use such as talking in general, public speaking, singing, and eating. For singers, voice is an integral part as “self-perception” (Dayme, 2009, p. 43). Unlike the external musical instruments of other instrumental musicians, the singers have their instruments biologically attached in their body. Thus, it is essential for the singers to be mindful of their internal vocal

instrument. Hence, a proper health management is essential since all of their works are depending on it.

Music is characterised by its emotional expression and singing embodied in the musical communication across all cultures all musical cultures. The following describes the vocal mechanism of the human voice. According to Sundberg (1996), the respiratory system acted as an energy source to produce the voice through vibration where the air stream from the lungs that suited the second component which is the vocal folds. He then clarified that the vocal folds become the source of the voice simultaneously based from different frequencies of complex tones sounding. The spaces of the vocal tract decrease in strength with the ascending frequencies above the vocal fold that correspondingly in relation between its partial voice sounds and series of harmony. Sundberg (1996) also explained that the vocal tract enhanced the voice output sound by compressing the pharynx and the mouth that complemented the spaces of cavity above the larynx.

2.5 Vocal Health among General Public

Sound in general makes the world unique and interesting and as human being, we were born with a natural instrument, the mouth that can produce sound. Just like other instrumental instruments, our mouth needs to be taken care of in order to maximise its function. Therefore, it is essential to take the appropriate procedures in the vocal health's prescription. Past studies had focussed on vocal health in terms of its health, behaviour, attitudes among the general public.

A vocal health survey was conducted by Sapir, Mathers, Schmidt, and Larson (1996) among 70 singers and 89 non-singer's female university students to seek responses on the following features like health and symptoms, vocal abuse in speaking

behaviours, attitudes and perceptions on singing voice and vocal health, and affective dysphoric disorders. The findings indicated that there were significant ambiguous responses from singers' and non-singers on their attitude and concern in voice, singing and vocal health.

Hunter, Smith, and Tanner (2011) studied on gender differences and vocal health shown that there are significant occupational health hazards issues among female "occupational voice users", which may due to the differences in the larynx. The noteworthy findings addressed the risks of women's voice disorder and summarised that women, regardless of their occupation, are more vulnerable to vocal health problems as compared to men.

According to Dayme (2009), the voice is mainly influenced by 4 factors, that is: (1) physiological; (2) psychological; (3) musical; and (4) emotional. These four aspects are related widely to the dynamics in both choral and talking practices as preference for: (1) choral instructors; (2) conductors; (3) organists; (4) voice therapists; (5) laryngologists; (6) psychologists; and (7) linguisticians.

Vilkman (2000) stated that voices become fatigue in a noisy environment. It was indicated that vocal issues are common in the profession with "heavy vocal loading", especially among those with exceptional working environment and surroundings with: (1) background noise; (2) long speaking distance; (3) poor room acoustics; (4) in adequate equipment like voice amplifiers. The study also indicated that educational settings like school and kindergarten are considered to induce vulnerable conditions to "heavy voice loading" (p. 120).

Hackworth (2007) also indicated that music teaching profession is subjected to the hazards of excessive use of the voice. An empirical study was conducted to investigate the issue of vocal hygiene among 76 public school music teachers. Both experimental groups were subjected to vocal hygiene instruction treatment intervention.

Experimental group 2 had additional intervention with behaviour modification instruction. Findings indicated that behaviour modification instruction intervention has significant effect on vocal hygiene. Hackworth (2007) also noted that work surroundings have negative impact on the management of vocal hygiene and vocal health routines. The study concluded that behaviour modification has an impact on the improvement of vocal health and mitigate voice fatigue. As stated by Duke Voice Care Centre (n.d.) on its vocal health information, vocal health is described as the care and feeding of the voice by taking care of the body and the wellness of using it.

In Rosen and Murry (2000) recent studies, the findings indicated that singers managed their vocal health through the necessary daily routine of food supplements especially to those who travel regularly with tight schedule. They also stated that the intake of fluid is vibrant to a healthy production of vocals; this is important where in the result of excessive perspiration, singers habitually rehearse or perform in weighty clothing and under the exposure of the sun or hot lights.

There are plenty of approaches to endorse vocal health; the consumption of water is one of the most effective and cheapest ways of doing so. The effectiveness, quality and appearance of vocal fold and the singing mechanism can be improved by hydration as proved by researchers (Behlau & Oliveira, 2009, p. 154).

As a performer, stress is a common thing as it normally occurs as it can be both physical and psychological. Thus, sufficient sleep and rest; steam therapy with body massage, and other calming effects are essential treatments. Furthermore, it was emphasised that keeping hydrated with plenty of fluid is vital to all vocal professionals to avoid vocal abuse (Rosen & Murry, 2000).

In addition, Parker and Parker (2002) stated that vocal abuse is a negative behaviour or which may have resulted injuries on the vocal cords. These abusive behaviours on vocal cords are listed as “excessive talking, throat clearing, coughing,

inhaling irritants, smoking, screaming, yelling, and misuse” (p. 11). The vocal abuse may eventually cause temporary or permanent damages in the vocal function or the possibility in the loss of voice.

2.6 Vocal Health in Classical Singing

In today’s reality, the classical singing genre is not as widely known among the general public comparing to pop singing. This may due to the image and impression of pop singers making more income and publicity; and the demand for classical singing in in the declining trend in 21st century as it is only restricted to corporate thematic events, classical concerts and education events.

For classical singers and their coaches, one of the training techniques is the Accent Method of breathing, where it is considered to be efficient and helpful for the transverse abdominis muscles in vocal support strategies where singers focus on the tongue release along with the addition of the puffy cheeks’ exercises (Chapman, 2011). According to Hunter, Svec, and Titze (2006), they stated that, somewhere around 3–4 kHz is considered to be the most sensitive part of human hearing where the frequency and its intensity ranges around 20 μ Pa at 1 m of vocal production made by the classical singers at the actual pressure level of the sound. Therefore, it is understandable that those exercises are very important for classical singers because of the range and dynamics in classical singing are very wide and in order for them to throw their voices in a wider range especially when feeling of voice fatigue (Carroll, Nix, Hunter, Emerich, Titze, & Abaza, 2006).

Sataloff (2006) indicated that anatomy, physiology and neurology are critical issues in vocal health and pedagogy and it is vital to put into consideration in the vocal

pedagogy for children's singing, the aging voice. It is particularly useful for vocal health strategies among choral singing and choral music educators.

Chernobelsky (2007) indicated that the treatment of voice therapy has a positive effect on "voice quality, vocal status, and vocal facility" (p. 178), specifically on the vocal fold nodules, which is a consequence of vocal abuse. A medical study was conducted with nonsurgical treatment among 28 professional classical singers with the issues of vocal fold nodules. The findings concluded that use of appropriate physiology singing methods produced desirable results which evidenced in temporary disappearance of soft nodules and discontinued the resolution of hard nodules.

In popular musical styles, singers often rely on the on-stage monitor loudspeakers feedback during the performances. The feedback of the noise from the loudspeakers on stage is normally too soft as compared to the ambient thorough level. Therefore, the regularity of continuous varieties of some orchestral accompaniments in pop music when it is set to the highest volume, it is stereotypically linked to the traditional orchestral ensembles (Borch, & Sundberg, 2002).

2.7 Vocal Health in Pop Singing

"Belting" is loud singing with the use of chest register common to pop singers. Schutte and Miller (1993) conducted a study on the "belting" approach to non-classical singers, an approach to allow female singers audible in the low-middle range of a brassy orchestra. The study employed what was known as the spectrographic, electroglottographic, and sub- and supraglottal pressure to measure the differences in acoustic and larynx between the "operatic" and "non-classical" singers. The study concluded that proper vocal training leads to a better use than abuse singing technique and trained singers has lesser negative effect on the "potential abuses" (p. 149) than the

non-classical singers. Therefore, in order for the singer to do the belting technique, the level of experience, and their beliefs about causative factors, career impact, and optimum treatment to one's vocal health is essential (Hogikyan, Appel, Guinn, & Haxer, 1999).

From the subtle complexities and demands of the professional singers, emerged an exciting challenge and distinctive responsibility for the otolaryngologist or head and neck surgeon to address issues in vocal health. Titze, Lemke, and Montequin (1997), categorised vocal professions that have excessive use of voice included: (1) singers and actors; (2) politicians; (3) attorneys; (4) clergy; (5) educators; (6) physicians in some cases; and (7) telephone operators.

2.8 Conclusion

This chapter discussed the literature review on the relevant constructs related to this study which include the technique and vocal use of classical and pop singing.

CHAPTER 3

METHODOLOGY

3.1 Overview

Rhee (2004) elaborates that case study is a strategy to be used when a researcher intentionally study real life ~~to~~ in contextual conditions. As Rhee mentioned, case study can be use when one wants to do in-depth learning on a case for insights. The purpose of this study aims to examine the vocal techniques and the vocal health among Classical trained singers and pop singers. This study also aims to explore the perspectives of Classical singer singing pop song on the use of vocal techniques and vocal health.

This chapter aim to provide a succinct description of the research methodology which organise as below: (1) research method; (2) research design; (3) data collection procedure; (4) sampling procedure; (5) participants; (6) interviewing procedure; (7) interview questions; (8) data analysis procedure; and (9) conclusion.

This chapter discussed the research methodology used to address the research objectives of this study: (1) the warm up techniques for classical trained singers and popular trained singers; (2) the vocal techniques of classical singing and pop singing; and (3) the relationships between vocal health and vocal technique in classical singing and pop singing.

3.2 Research Method

As stated by Leavy (2017), the research approaches in qualitative studies aim to “value depth of meaning” and the “meaning-making processes” of the participants (p.124). Qualitative approaches are based on descriptive method (Kumar, 2011, p. 131). Fraenkel, Wallen, and Hyun (2012) also indicated that qualitative studies are “descriptive” (p. 16) and aim at “holistic description” (p. 426) which emphasised on the

understanding of “situations and events” (p. 10) from the participants’ perspectives. Qualitative methodology aims to obtain participants’ written or verbal descriptive data and observable behaviour (Taylor, Bogdan, & DeVault, 2016).

This study employed the qualitative research methodology to gain in-depth perceptions of the vocal techniques and vocal health among the classical trained singers and popular trained singers. The study aims to provide descriptive data which is representative of the views and perspectives of the participants.

3.3 Research Design

Yin (2017) indicated that case study is one of the most frequently used qualitative research methodologies. Thus, case study is used in this study to gain deeper understanding of classical trained singers singing modern style pop singing’s genre from the aspects of vocal technique and vocal health.

As stated by Cohen, Manion, and Morrison (2018), research design is the ‘plan’ and ‘foundations’ for researchers to approach, to work and to investigate the research problem (p. 38); and to serve the objectives of the study (Leavy. 2017, p. 20). Cohen, Manion and Morrison (2018) also indicated that research design set forth the research approaches and methodologies to gather data from the cumulative perceptions from the participants. The important dimensions of research design include the participant sampling, data collection and data analysis procedures (p. 38). As for this study, the data source derived from interviews with the participants.

3.4 Data Collection Procedure

The process of data collection aims to collect information and evidence from relevant sources to seek evidence and outcomes to the stipulated research problems. In this study the primary data was collected from the interviews of classical singers and pop singers on their viewpoints in vocal techniques and vocal health.

The data collection procedure for this study included interview sessions with 5 professional singers who are eminent in the industry. The researcher focused on both teaching and performing experiences among the identified classically trained singers in Malaysia as interviewees.

3.4.1 Interviews

Interview is one of the research methods that are widely used by social researcher to collect data (Kumar, 2011, p. 228). Jamshed (2014) also stated that interview is a common data collection procedure in qualitative research and most of the interviews are either semi-structured or in-depth (p. 87). Jamshed (2014) suggested that semi-structured interviews are efficient with open-ended questions to explore the perceptions and insights of the interviewees “systematically and comprehensively” (p. 87). Further, Turner (2010) also supported that interviews provide in-depth information relating to the “participants’ experiences and viewpoints of a particular topic” (p. 754). So, once the interview questions have been answered, the researcher can gather all the data that is pertaining to the topic of a case study to be analysed.

Jamshed (2014) indicated that an interview sequence should be guided by open-ended questions which consist of “core question” and “associated questions” pertaining to the topic to be explored (p. 87). The main source for data collection was from the in-depth semi-structured interviews that consisted of four sections of interview questions

focused on interviewees historical background, their experiences in musical and/or teaching, vocal techniques and vocal health for both classical and pop genres to address the objective of the study.

In qualitative research, interviews are divided into three types where the first one being the structured interview. A structured interview is a control type of interview strictly by listing the questions prior to conducting the interview through a regulated format. According to Dornyei (2007), he stated that structured interview is easy in terms of analysing the data collection but, it has a limited room in terms of quality and richness of findings since it is depended on participants' comparison.

Meanwhile, unstructured interview is the second type of interview that is the opposite of structured interview where the flexibility of unpredictable outcome is higher for the interviewee. Dornyei (2007) clarifies that unstructured interview tends to generate a cheerful and relaxed type of environment to the participants so the interviewer can gather more findings. According to Creswell (2007), he stated that unstructured interview is suitable for a specific research which require the researcher to find a specific answer thus, this type of interview may like in terms of its limitations that could interrupt the researcher to lose track on the topic effortlessly.

The third type of interview is called semi-structured interview. Compare to unstructured interview, semi-constructed is more structured in terms of its procedure flexibility in collecting data. There are set of guidelines that need to be followed where the researcher needs to prepare their questions according to certain set of by-lines. Dornyei (2007), specifically stated that the interviewer has the freedom to prepare the questions in their own words but needed to elaborate more on the criteria for the interviewee to answer the questions.

In-depth, as previously mentioned is a term for an interview technique that benefits both the interviewer and the interviewee in the terms of exchanging further

details that could enhance the quality of the research. Furthermore, a free form conversation of in-depth semi-structured interview between both parties was used in this study to enable the researcher to gain more thorough and detail findings. Further, the data was analysed through coding based on the emerging key ideas pertaining to vocal techniques and vocal health.

3.4.2 Sampling procedure and participants

By definition, sample or sampling is the term that is used in research to specify a group, either living creature or objects for measurement of indication purposes. Sample as a whole is a representative to draw conclusions which enable the researcher to determine the characteristics by observing it. There are some difficulties that researcher shall face in measuring a population or specifying a sample: (1) large scales of populations; (2) population distance; (3) observing ferocity; and (4) sampling accuracy. Thus, it is vital for the clarity in the purpose of study to induce appropriate responses from their sampling.

Purposive sampling was used to select participants from the population of singers in Malaysia to participate in this study. There are five local industry singers who are ranked from novice to professional whom are classically trained were invited to participate as interviewees for this study which focusses on classically trained singers who also sing pop songs. They have been chosen because of the specific criteria that each individual has obtained during the duration of their experiences in educational study and industrial performances.

The systematic sampling technique is used in this study because the researcher required a small sample size without any hidden order. The reason that the researcher chooses to conduct the study by using this technique is because of its simplicity. All five

interviewees responded to the researcher's questions that are based on vocal techniques and vocal health. Those questions included vocal warm up, singing in both classical and modern, and a discussion about the particular topics. Based on the information that gathered in the review of literature, the interviewing questions were framed on participants' background, experienced, vocal technique and vocal health.

3.4.3 Interviewing procedure

Jamshed (2014) indicates that there are two types of questions in an interview which is core question and associated questions, and further elaborated that a matter of controversy between the interviewer and the interviewee is a suitable choice as the data could be more captured effectively. There are four sections in the interview that are consisted of both core and associated questions. The first is about history background which is divided into four basic questions on when the interviewees started to build their interests in singing, at what age, how they began their journey and their perspective on the difference between classical and pop singing in general. The second section of the interview was based on the areas of experience which consists of five questions.

The third section of the interview questions is related to the vocal techniques which begun with a question on what vocal technique that separates a classically trained singer and pop singer in general. In this section, it also included the question on the different type of vocal techniques that separate a classically trained singer and modern pop singer. Interviewees were also asked about how they developed their vocals based on the issue that they often struggled with while performing their repertoires during their study days. The final question in this section focused on the vocal exercises that the interviewees work on more to develop their voices.

The last section of this research interview question focussed on the topic of vocal health consists of four main questions with other sub-questions. The first question

in this section was about the preparation that interviewees normally do before their performances. The next question was about the guidelines on how to take care of the interviewees' voices with a sub question on to further elaborate their answers on the way of how to avoid them from damaging their voices. Then, the question on is it acceptable for the interviewees to take drugs or other medication such as pills, injection or any other type of medical support to instantly cure their damage voices. Lastly, the interviewees were asked on if there is any procedure that they practice for major issue concerning their voices.

In this section, the interviewees were asked on their point of views on the importance of classical technique in pop singing. The interviewees were also inquired on whether the classical technique helps them in singing pop songs throughout their experiences in the industry. Subsequently, the questions on how the interviewees teach or guided their protégé were forwarded. The continual questions were about their preferences when performing their songs with heavy movements such as dancing or the full use of a stage. Lastly, the interview sessions ended with an associated question on challenges in vocal issues as classically trained singers who are in this industry also sing pop song.

3.5 Data Analysis Procedure

In the context of this study, there are two parts of organize narrative interview which conclude the semi-structured interview and the in-depth interview. The data analysis procedure, according to LeCompte and Schensul (1999), outline the process of analysis where the researcher accustoms to decrease the interpretation of the particular data. Meanwhile, Patton (1990) bestowing that during the analysis, researcher is required to specify the three main issues that often occur and those are as the followings: (1)

organised data; (2) the reduction of both data summary and category; (3) identifying the data that are linked to its patterns and themes.

According to Merriam (1998), she highlighted the important methods in data analysis that consists out of ethnographic, narrative, phenomenological, and the method of constant comparative. Ethnographic analysis is based on population related categories which involve human being, culture, works and environmentalism.

Meanwhile, anthropological models are based from the narratives of various stories in the context of cultural, religious, social values, and their beliefs. Literally, the narrative models are used to analyse and interpret the perspectives of ideology in a theoretical context that is based on text. Merriam (1998) lays out that the phenomenological analysis can be looked in various ways through the epochal approach based on the first and second order of knowledge from a person's assumptions. Merriam (1998) also added that the conceptual relationships are the codes that a researcher used for the constant comparative method.

In this research, the interview sessions that has been set with five professional singers who are working in the industry; as the researcher focus on experiences in both teaching and performances, among the identified classically trained singers in Malaysia as interviewees. All five interviewees responded to the researcher's questions that were based on vocal techniques and vocal health. Those questions included vocal warm up, singing in both classical and modern particularly pop music and a discussion about the particular topics along with different sources were gathered for thematic analysis.

There are several approaches to analysing data. According to Bernard (2000), he accordingly summarised the term of approaches started with hermeneutics or interpretive, follows by narrative and performance, discourse, grounded theory, content, and ended with cross-cultural approach. In this research, the hermeneutics or interpretive analysis approach is used by the researcher. As to what Bernard (2000)

stated that this approach interprets the words of texts and as regard to this research those words represents the answered questions from the respondents.

The researcher spent most of the time listening to the interview sessions to interpret the speech from the audio recordings by transcribing it. Once the transcribing process is complete, the researcher gathered the information for thematic coding. When the coding is done, the researcher gathered the data to provide the grouping process for data analysis.

3.6 Guidelines for Coding and Category

As far as the growing of qualitative research design goes, it offers the researcher on analysing the data that have been collected from its fields of study. An in-depth analysis could occur depending on the finalized tasks as the initial process including the data from the transcribe interviews and field notes.

According to Merriam (1998), she describes the complexity of data analysis process between the descriptions and interpretations that moved forth and back by using both reasoning of inductive and deductive. Merriam (1998) then further elaborated based from the description approach of grounded theory by Glaser and Strauss' (1967), that the conceptual links amongst the categories and properties were provided by the hypothesis through the constant comparative method.

The constant comparative method is often used by researcher to analyse data by sorting the assigned codes into groups based from the field of study that echoes the various data of categories and properties. Categories and properties should have the following contexts as according to Merriam (1998): (1) reflecting on the purpose of research; (2) comprehensiveness; (3) equal in limitations; (4) subtle in the form of content; and (5) theoretically consistent.

In order to define a category, the coding process should be valued by seeking relevance in terms of data that could have the possibilities to generate it. There are five elements that the researcher need in order to generate a decent code based from Boyatzis (1998) statements: (1) label specification (for example: name or place); (2) categorizing the themes based from research questions; (3) a proper explanation of how the theme occurred; (4) an explanation on the appropriateness to the identity that defying the theme; and (5) a set of list of examples and comparisons to eradicates confusion so that the data can be closed and confirmed.

Based from this research, the researcher used the theory driven coding approach. This approach started with the theory that the researcher has developed based from the formula that support the evidence of the researcher is theory. The results from the hypothesis on the theory are elements defining the final product of the coding. Prior to that, the development of the coding schemes is also used in this research. Data driven coding involves the development of inductive coding as its third approach which is based on the concrete or solid data that have been collected from the perpetuate study.

According to Strauss and Corbin (1990), standardized that based on an on-going basis the data are analysed through the comparative method that is often used to build a certain theory around for an appropriate purposed which relevant to the inductive approach prior to qualitative research method of data analysis. Further, all the data from the transcriptions or its sources should be photocopied and kept in its rawest forms so it can be used for the analysation process. For the purpose of exploratory research, it is almost impossible to replicate its originality of contents. Therefore, the qualitative research method has a clear distinction amongst its data in both preparation and analysing stages where it often started once the data came to existence.

The findings from data analysis are organised to answer the research questions that have been clarified in Chapter 1. In order to analyse the data, it is crucial to have a

clear understanding of the purpose of analysis and its preparation. The analysis and preparation often happened in a parallel context that includes four requirements that needed to be followed. From the transcription of data, it is essential to acquire the familiarity with data in hand; since the qualitative data generally consists of words, it is notable the reading the interview data repeatedly to be familiarise with it and to search for basic recurrence of similar patterns.

Secondly, the researcher needs to revisits the research objectives that have been set to ensure the data collected from the respondents are align in contrast to the research questions. The researcher then needs to develop a framework or in a data preparation terms is known as data coding where broad ideas, concepts, phrases and codes are identified and categorised.

Lastly, the researcher identified the patterns and relations emerged through coding, and further with the identification of themes to address research questions, and also ancillary findings to be explored further.

Coding is one of the most important steps in research writing especially during the data analysis process to group up the responses from the specified samples. The validating process consists out of four steps. The first one is to find out the possibility and the outcomes of the research, secondly, the researcher need to expand the prospects of the study as far as possible in order to get a concrete result. Thirdly, the data collection needs to be pre-set according to standard whether the researcher have completed it or not and lastly, the criteria of analysing data should be done without any prejudice where the completeness of the research was based on the process where the researcher ensures that as an interviewer, that all the questions have been asked and answered by the respondents.

This chapter is constructed based on research questions and the data provided. Therefore, the findings of data focussed on warm up, vocal techniques, vocal health and relationship between vocal health and vocal techniques.

3.7 Conclusion

This chapter has presented the methodology of this study as it has concluded the followings sub-topics of research design, data collection procedure, data analysis procedure for this study in general.

Universiti Malaya

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 Overview

This chapter focusses on data analysis and findings of the interview questions. The sections are organized as follows: (1) warm up; (2) vocal techniques; and (3) vocal health.

In classical singing training, it requires a rigorous training and preparation to obtain desirable achievement. The classical singing techniques involve a forward tilted larynx, projection of the voice, vocal register, vocal masque that is literally their facial features and good singers achieve stellar vocal sound when the sound is resonating from behind the eyes, and within the nasal passages. The melodic parts are complex in structure, and tend to have longer repeated phrases, and more challenging. Classical singers are the most open and with lesser tension. According to Sataloff (2017), with a proper diaphragmatic support, correct positioning of hard and soft palates of the tongue relaxed muscles around the mouth, jaw, and cheek bone, open throat and eyes, vocal sounds can fully resonate within these cavities.

Pop singing requires training, however, the process and techniques are varied from classical singing where pop singing is the most controlled and constructed. No matter what genre the singers sing, the support and the breath is the same. The changing of the shape of the resonance and the vowels specifically for the resonance can really change the way it sounds. There are few differences pop tends to bring a heavier, chest-dominant sound into a higher register than classical. The resonance in pop singing tends to be further forward and slightly nasal compared to a rounder, more balanced resonance. There are some typical areas of study that singers should learn such as

breathing and air support for singing, posture for singing, phonation, voice resonance or voice projection, diction, articulation, vocal registration and many more. According to Catharine (2000), technique is only the means by which to express yourself where on the contrary the most important aspect is expression as it is thought to convey a message (p. 4).

The result was presented to address the following research objectives. The research objectives included the differences between the preparation of warm up for both trained classically and popular singers, the differences on vocal technique in comparison between classical singing and popular singing techniques and the relationship between vocal health and vocal technique among both trained classical and pop singings.

4.2 Findings of the Study

The findings are organised as themes below: (1) warm up; (2) vocal techniques; and (3) vocal health.

4.3 Vocal Techniques

Vocal technique is essential for singers particular for classical trained singers which includes, warm up, breath support, articulation, tone, placement, transition and style. Davids and LaTour (2012) defined vocal technique is defined as the way on how singers utilise their abilities to improve or enhance their singing based on rich resonance and tone quality, improvement of the vocal range, controlled intonation, and flexibility in musical expression.

The three principles below are considered as the most fundamental for singers: (1) support (2) necessary twang; and (3) control of the protruding the jaw and tightening the lips. These enable the singers to reach the higher and lower notes within the individual vocal range when singing longer musical phrases and to achieve vocal quality of clarity and power (Sadolin, 2000, pp. 13-14).

From the interview data, the following discuss the findings of each singing technique analysed from the interview data. Participant 1 indicated the importance of vocal techniques:

For me, all the classical singers cannot run from the vocal technique. The entire vocal technique is utmost important.

She then clarified her statements:

It is not just lip trill exercise, and tongue trill exercise that is important because for me, the exercise process will make our vocal firm and produce a good classical tone.

Participant 1 suggested a few essential techniques for the considerations of novice singers, which include: (1) articulation (particularly staccato); (2) breath support; (3) dynamics; (4) pitch, projection, staccato, tone quality and warm up which are suitable for both choir and soloist with and without experiences. All these techniques are essential in the production of individual vocal effects with versatility and style among vocalist who are trained classical singers and later to sing pop music where the difference is more about colouring the song's textures. Participant 2 also shared the same viewpoint:

These techniques seek to develop the singer's voice to conform to the concept of beautiful sound.

He then suggested a descriptive way to sing:

So, techniques that differentiate classical and pop are classical technique, singing with a yawn.

He further gives an example on his previous statement:

Some classical techniques emphasised the lifting of the soft palate and to maintain an open throat ... like a yawn.

Although singing technique is most vital and essential for singing performance, emotive elements should be also in musical consideration. Most participants emphasised the affective aspects of singing. The meaning and essence of the song will be lost without the emotive components. Therefore, vocal technique is essential in conveying and enhancing the message of the lyrics.

Participant 3 expressed that:

Singer can sing a song with correct notes, but it is incomplete if they are lacking in emotional expression and overall performance will be affected.

From the interview, all participants concurred that although singers, especially the novice may know that vitality of vocal techniques, but not all have the professional knowledge of the proper singing techniques.

4.3.1 Warm Up

Warm up is an important component in a practice routine, especially among the most disciplined performers. Kenny and Mitchell (2006) indicated that allotted timing for warming up varies according to the individual. Vintturi et al. (2001) noted that within 15 to 45 minutes is sufficient for effective vocal warm-up and Gish et al. (2012) suggested about 5–10 minutes is sufficient for a good warming up

Why singers have to warm up their voices? The interviewees have differences and similarities in their perception of warm up among classical and pop. For the classical singers, warm up is most important to those who have passion in singing; there is no exception to not warming up before performance. This is because our body have a lot of muscles so, warming up is one of the ways to help loosening up the muscles stress. Participant 5 emphasised her understanding towards this view:

I am still in the process of developing and understanding my voice actually... and to say the least, I always have breathing problems and some abdominal support problems.

She also gave some suggestions and specified that:

A lot of exercises can be done such as arpeggios, lip buzz, solfege and other appropriate ways.

Generally, participants suggested that warm up is to stretch and make the voice flexible. It was indicated that when speaking, a very limited range of note within a small speaking range were utilised and even speaking throughout the day is not sufficient to get the voice warm up for singing. The purpose of the warm up is to circulate the blood into the interior of the muscles and to make it thinner. So that it becomes more stretchable, more flexible and this will help in reducing injury. Participant 1 shared the concern of warming up:

Vocal warm up improves the quality of the singing voice and prevents vocal injury... it is important to warm up.

The participants concurred that the execution of the physical warm ups enables the relaxation of the muscles and the body; and to maintain a right posture when singing. The participants also advised that vocal warm ups are aimed not just to help the singers warming up their vocal cords, but also their resonators and the vocal mask.

When done appropriately, the singers will feel the intense resonance and vibration in various areas such as the chest, throat, mouth, nose, ears and head.

The participants recommended that singing difficult scales at loud volume or at extremely high or low parts of the singer vocal range is unnecessary. This extreme may have negative effective in warming up the voice, and in turn, harmful. Participant 5 stressed that:

Vocal warm ups are supposed to be relaxing and easy...to help stretch the vocal cords... as a preparation to sing.

Participant 2 commented that:

We are all different; every individual has different voice and takes different length of time to warm up our voice. As a norm, most singers spent 10 to 15-minute warm up routine to get the voice going... some singers feel like their voice takes longer to stir up... and they continue with the warm up exercises until they feel that their voice is ready to do more.

In sum, it is indicated that warm up is essential for vocalists both classically trained and pop singers save that classical trained singers have a proper and systematic ways of warming up, and also have exposure in their vocal repertoire.

4.3.1.1 Proper Warm Up

According to Kenny and Mitchell (2006), proper warm up include the followings: (1) facial massage; (2) stretching; and (3) contortions. Stressful lifestyles and emotional tension affects the face muscles without realising. Habitual tension often result the challenges in relaxing the mouth, face and lips and thus affects the production of beautiful, flowing tone. It was suggested that face stretches and exercises are adequate warm-ups before engaging in singing. Participant 1 commented that:

Some people come to lesson with incredible tense faces. Facial tension is one of the things we want to let go from we sing. When we sing, we need to have the relax face.

Contortion is the act of twisting, which displays through dramatic bending and flexing the body. The important thing to do during the warm up is to feel the abdominal muscle, diaphragm and the spinal works to support the voice for better projection and consistency in vocal singing. If singers raise the palate of the vocal tract, it will become larger and the sound colour shall darken. When raising the palate, singers will automatically lower their larynx and based on that method, it contributes to the darkening soundings. Participant 2 again emphasised that:

The warming up technique of the voice is a major part of any systematic vocal pedagogy. The proper posture affects how the bones and joints of the skeleton work together with the body muscles.

The participants described the skeleton as steel frame of a skyscraper, which provides support, protection of the nerves, organs, muscles and other tissues. As it is hidden, and often being neglected. Participant 3 elaborated in more details:

When the singers curl up their spine and forward the shoulders, the lungs are compressed... with pelvis our larynx tilted. Or twisted posture ... this can affect the breathing and the voice. All singers have different bodies. Always adopt a posture in harmony with their body.

Participant 3 also reminded that:

The singers have to make sure that posture does not feel unnatural as that would require too much concentration, leaving too little energy for the singing.

In the interview, the participants concurred with the importance of proper warm up. All agreed that warm up sessions are utmost vital for singers prior engaging in any

singing activities. Participant 4 who was a Classical singer before engaging in pop singing indicated that:

I always do my warm up before any performance even that my body couldn't take it anymore.

She explained her reason on why it happens:

Since singing warm up works similarly to the warm up for sport athletes; it wakes all the muscles so that I can deliver for my performance at that particular moment.

She further elaborated the similarities and differences between Classical singing and pop singing warm up:

Throughout my experience I found out that learning classical singing helps me to sing pop song to the highest level.

She stated that classical singing required more adequate techniques to aspirate each note in a particular repertoire to be performed. Participant 4 defined her vocal preparation procedure:

I manage and control my vocal delivery through breathing, placement of note and range through articulation and dynamics.

As suggested by Lamperti (1905), the classical singing, especially bel canto, the warming up includes placing, developing, and equalizing the voice to achieve a pleasing tone quality. Participant 4 further shared that warm up routine is ritual to all Classical singers. She emphasised that all singing must abide this routine diligently. She asserted that:

There are varied school of thoughts for Classical vocal technique ... the Italian bel canto, and others, example, the Germanic Covered Sound.

She further mentioned bel canto, and appraised this classical voice method is most fundamental for a predetermined sound quality. Participant 4 then clarified the differences between classical and pop techniques:

... Classical technique, usually singing with a yawn with lifted soft palate.

All participants were concerned of the lack of professional knowledge in warming up among novice singers. They commented that these singers tend to neglect the importance of proper warming up. As they observed, the novice singers take warming up as some “small matter” and there are no differences with or without doing so.

When asked on the popular singing, all interviewees indicated that popular singing has more flexibility and freedom in warming up. However, they stated the similarities and also compared the differences between the warming up procedures of Classical and Popular singing. Participant 1 continuously described the notion of “singing with a yawn” and elaborated that:

As for pop singing, it is more to freedom. Warm up that differentiate classical and pop are classical warm up characterised like a yawn.

They also mentioned about the difference between the classical and pop technique in terms of warm up. Participant 4 said that:

The most usual and obvious difference between classical and pop technique warm up is the end of the result.

Participant 4 highlighted and gave an example:

For an instance, have you ever heard a singer who has opera training sing pop? Unless they disregard the grounded techniques from their training, otherwise, they all sound operatic.

A further explanation about the warm up is further elaborated:

So, to grasp some essential ideas, try yawn while holding your throat in that open position, and sustaining an “Ah” sound.

She invited the researcher to demonstrate with her stressing the word “Ah”:

Now say “ah” as in a normal conversation and relax the throat.

Generally, it is important for singers to have an established warm-up procedure and spend probably over 20 to 30 minutes to spread out; and it depends on the singer’s experiences as vocal skills increase, warm-up time tends to relatively decrease (Shewell, 2009, p. 49).

The relaxation of the jaw like in a normal speech enables the singers to improve their vocal tone. The yawn allows a stretch in the muscle, other than relaxation, also enable the flexibility of the laryngeal muscles and the tongue (Miller, 1996, p. 80). Yawn may be useful in establishing proper laryngeal adjustment, but there is an inherent danger, because once any form of yawning is suggested, the yawn tends to run onward to completion. In addition, Participant 4 explained the various ways of warming up:

For me, vocal warm up is very important. If I do not have time to warm up, I’ll still find a time to warm up for at least 10 minutes.

She enlightened the statement and further suggested:

I will make a lip trill where it forms tone placement and the sound will be cleaner and more consistent. As well as bubbling, staccato which is also an essential tool for the acquisition of skilful vocal technique.

She also defined the other implementations of the staccato technique:

Staccato enables the correct “attack”, suspend the breath and also guide the voice to land at the right place.

Physical strengths are required in singing but it may tighten the throat; and some singers tend to “cheat” or seeking alternative approaches to deal with their constrictor muscle of the throat; and lead not into constriction even when singing technically difficult and physically demanding music materials. This is what Kenny and Mitchell (2006) described as keeping an ‘open throat’; as by definition, an ‘open throat’ refers to ‘not constricting’. When the throat is open and the stretching of the vocal cords is unhindered, the pitch will be secure, and the wear or fatigue of the vocal cords is avoided. Participant 2 similarly considered vocal warm up as gainful to the singers. She said that:

The vocal exercise process is the main role of how to become a great singer. Meaning that, the entire vocal warm up such as lip thrills, tongue thrills, bubbling and so on will make us a good singer.

When singers sing, they tend to be careful and vigilant about the position of the lower jaw because if it is pressed outwards, it might produce constrictions around the vocal cords (Sadolin, 2000, p. 47). On a proper scale, the mouth opening must be smooth; for example, at leaps of intervals the mouth must leap in similar manner as singers will eventually learn the exact mouth opening required for each vowel for each pitch. Often, naturally, the singers will discover the correct position by themselves based on the instinctive mouth opening and movements; and once it is habitual, the singers will no longer need to take heed to mouth opening (Sadolin, 2000, p. 54). Participant 3 suggested several warm up exercises to help the singers to sing without strain:

The only one is open jaw, tone placement, then projection. So, when all three of these techniques come together, then we do not strengthen our voices.

He then explained the three essential techniques about warm up:

But these three techniques when we use it support the right way, precise tone placement position, and intonation exactly with placement. So, when we open jaw the sound frequency will be forward without us screaming.

Therefore, with the high soft palate the vocal vibrations are able to move out of the mouth instead of through the nose, to avoid the nasal tone. Conversely, the low soft palate will result in excessive nasal resonance (hyper nasality) where vibrations leave the channel through the nose instead of the mouth (Sadolin, 2000, p.15). If the singers shaped a smaller tongue, a darker sound colour is evidenced when the vocal tract is widened. This technique is known as the compression of the tongue with the tip of the tongue lies flat in the oral cavity, arches in the middle, and pulls into itself at the back, hence, enables the vowels to be more operatic.

As such, the purpose of warming up properly is not only to warm up the singer's vocal cords but, it also triggers the singer's resonator and vocal mask. Singers will feel much resonance and vibrations in various areas such as chest, throat, mouth, nose, ears and head when warming up is done properly.

4.3.1.2 Misuse of Warm Up

The voice skills approach consists of five main phonation exercise which includes excess tension, roughness, breathiness, creak and phonatory stamina. It is usually to be cautious with excessive warming up. Singing 30 minutes with intensive vocalisation before performing an demanding operatic role is illogical and not advisable (Miller, 1996, p. 80). Yawn may be useful in establishing proper laryngeal adjustment, but there

is a hidden danger, as any form of yawning is suggested, the yawn tends to run onward to completion. Participant 1 stated that in case of excessive warm up, singers should consider taking injection based on professional doctor advice:

I was told that every singer, if there was one injection that allowed the singer to recover as usual 1-2 hours after the injection which is steroid.

She then explained her reasoning:

I was told by my vocal teacher Miss Syaafnaz Selamat, that if we take steroids; it will liberate and disable our vocal cord which is very bad for singers and of course when we talk about steroids, it's a drug.

It was indicated that the most important things that singer should discern when encounter a laryngeal problem is not to whisper; as whispering impose stress on the vocal folds and thus prevent the vocal folds to vibrate. She warned the consequences of injection if the singer persists continuously:

We can be addicted to take the injection whenever our voices are hoarse and sick even the sweet for sore throat which it should be reduced because its function is to reduce the pain, but it only lasts for 2-3 hours.

Participant 2 further explained about the problems in vocal cord:

The common issue for me is when my vocal cord has a problem. This is a serious matter because when we see the vocal cord, we are sick with ulcer, it is especially worrying about us as a singer.

He further suggested the use of endoscope to identify the problem:

At that time, my vocal teacher, Professor Siti Charani Proehoeman, took me to the clinic and that was my first time I saw my vocal cord using an endoscope.

All the participants highlighted that most singers have not been given this matter due consideration until the situation worsen. Participant 2 then, averred his claims:

There is a little red but fortunately it is not an ulcer. So, at that time I was actually advised to rest for 6 months because when our vocal cord had problems, we could not talk.

A brief explanation was given to suggest how the problem can be solved:

In fact, I took my own initiative where I practiced my way. I avoid drinking cold water, eating spicy food.

He ended the question by assuring what he did during the recovery period:

During the month I took the time to heal and thank God at that time the redness on my vocal cord was gone. In fact, that is the trauma I experienced during my vocal study.

Tension of the muscle fibres vary when they are contracted and tighten which has an effect on the neck and jaw muscles and in turn a negative effect on the vocal tone quality. Thus, even though that the purpose of warming up is to help the vocalist to prepare themselves before singing in the performance in a positive way but, it also has a negative effect if it is done wrongly or excessively.

From the findings, it was indicated that the warm up technique are the same for classical and pop singers. However, classically trained singers are most knowledgeable and careful of warm up as compared to non-classically trained. This is because at times, the non-classically trained, they misuse the purpose of warm up by over practicing it without any guidance or at unsuitable times, that is, prior before performance.

4.4 Vocal Techniques

The following presents the findings on vocal techniques which include articulation, tone, placement, transition and breathing.

4.4.1 Articulation

Tone production is one of the most significant differences between classical and pop singing. Like speaking, singing is the projection of sound with tonal imagination from the endowed vocal mechanism framework. The word 'voice' is synonymous with phonation which indicates the vibration of the vocal fold to produce sound. Voice is thus defined as the emerging sound from the mouth or nose, through regulated breathing and vibration, vocal tract and resonators. Other than the biological and physical aspects, it is also grounded by the individual emotional state during performance and speaking. Participant 3 realised the precise and useful techniques, and the advantages that he gained which enable him to deliver a better performance. He indicated that:

Actually, classical singing techniques have a lot of advantages for pop singers because based from my experienced and from what I have learned based from studying at ASWARA.

He then elaborated his statement:

I've found out that the range of my voice changed drastically from the middle C to Bb; from a baritone to tenor 1, where before this, I couldn't reach a specific range but after gaining all the possible knowledge and with a lot of endless practice throughout the whole 6 semesters.

He further clarified his statement:

Other than that, the articulation technique helps me to sing clearly with a proper emphasize (a, e, I, o, u).

Participant 3 further clarified the effect of techniques on his delivery:

Specifically, those two techniques help me to deliver a better performance when I sing pop songs in my performance.

These responses concurred with Morrison (1994) notion of classical voice method that the prime goal is in predetermined sound quality (p. 216). Nevertheless, the challenges for the singers are to discover the best ways to maximise the power and capacity of the voice with natural free resonance and other essential features (Sadolin, 2000, p. 62).

The vocal range is divided into five registers with distinct areas of notes without a specific sound. This indicated that the singers are unable to hear the sound colour and the realisation of the register they are singing, but, only the pitch (Sadolin, 2000, p. 93). Curbing may be established by holding the breath and applying a large amount of support; as though something is holding the larynx; there a pressure, as if something is held in an exact position; or as if something is turning (Sadolin, 2000, p. 93).

Further on the interview, Participant 3 shared his problematic issues in singing high note; the efforts in carrying out appropriated warm up routine; the problem-solving process. He explained:

My voice is baritone. So, for baritone it is a relatively low tone, lower register. So, the lecturer will train me with the songs given. For example, 'caro mio ben'... the highest note is B flat.

He clarified his previous statement and explained that:

When vocal warm up, Prof will warm up until the highest note that is higher than B flat ... for example, until C. Although uncomfortable, at the least I can touch the note. So, if we want to sing the song, it will be easier. So, for me, the hassle of singing classical is the highest note and also dynamic.

He identified his problem and concluded that:

In classical especially the baroque piece too straight forward, cannot be legato. So that's the trouble. First is lip trill, bubbling, hissing, staccato, aspirato, which is to relax our muscle.

The extensive range of the human voice can be achieved by the skilful manipulation of the varied registers (Sadolin, 2000, p. 108). Overdrive may be coloured in different directions but easiest in the lighter direction. It is also possible to colour. Overdrive in a darker and richer way entails competency in the basic foundation of singing and familiarity with own voice to realise its healthy limits.

Articulation has a broad meaning which is defined as the pronunciation or diction of speech. Shewell (2009) suggested six aspects of articulation that are related to speech, which include “use of individual words, speech sound clarity, pace, pause, fluency; and rhythm” (p. 203). So, the articulation technique helps singer to pronounce the words with clear diction, clarity in sounds projection controlling the smoothness pace of the rhythm and widen the range of the singer’s voice.

4.4.2 Tone

According to Sadolin (2000), the tone or sound colour is produced in the vocal tract within the mouth cavity. The structure of the vocal tract is fundamental to the production of varied sound colour. Shewell (2009) the facial muscles have the effect on the vibrations in the mouth and nose; and the resonance can be improved by exerting the firm tone of the muscles, which otherwise flabby muscles absorb sound (p. 148). Shewell (2009) further clarifies that as an act of voice production involves many fine muscles, an effective control of the facial muscles with efficient movement enable tonal change.

Participant 4 ascertain that the mastery of classical technique in producing quality vocal tone is not easy and took a long process but it is useful; and these techniques help her considerably in singing:

It took me 3 years to improve with the common issues that have been experienced when learning classical technique is to get clean tones.

Participant 4 elaborated her problem and further explained her understanding towards it:

This is because my range of sounds is quite large and breathy at that time. But I cannot easily despair and ask questions and learn from mistakes until I understand the technique completely. Whatever, so now I'm still studying and learning.

Participant 1 mentioned the similar problem and supported the viewpoint as Participant 4:

Obviously, our tone is a bit different. If in classical, we use head voice and the tone is very strong and bold...but when we use our head voice in pop song, the tone slightly different, lighter and approach more to pop.

She then added:

One more thing, when we talk about pop songs, it's freer. Not too many rules and classical is good because it makes us more disciplined. Discipline in singing.

As such, to produces a vivid, rich resonant tone for both classically trained and pop singers is the head voice. In classical music, vocalist use head voice in the majority of the repertoire since the nature of classical music was composed with a lot of high notes, range and pitch. In pop music meanwhile, they use of head voice is determine by the genre of the song and how the composer composed it.

4.4.3 Placement

Singing classical song in general is not easy since it requires proper technique along with proper breathing support for the singer to do their best. Prior to that, singers need to get the techniques of placement correctly. The vocal techniques can be categorised as: (1) lip trill; (2) bubbling; (3) hissing; (4) staccato; and (5) aspirato, which are to relax the muscles. In the interview, Participant 3 shared his thoughts and experiences:

What I see clearly is the open jaw. For example, when we think high, we must drop our jaw in classical singing.

He identified and gave the examples below:

If the vowel is E near the highest note, just open jaw and hit the note and tone placement we are in place.

For pop music, he stated that:

But if pop... when we do so, it will be awkward and undoable...because open jaw techniques there are certain places to apply...same in traditional songs.

When we think high, we must drop our jaw in classical singing. Besides that, Participant 1 responded and in support of Participant 3 with her statement:

Obviously, they should know the correct singing techniques which apply more on the register.

She wrapped up her statement by stating:

So that they can understand on how to get a correct tone placement in order to develop a powerful and strong tone.

Participant 2 stated that:

In my opinion, the advantages for the classically trained singer in singing pop song is to achieve the consistency in singing through tone placement where tone or vocal placement focuses on resonance and vocal registers.

In summary, the register technique helps singers to widen their vocal range thus, the effectiveness of it dependable on the singers understanding of their vocal registry. This is because once the singer has a complete knowledge about themselves then their registry can work independently with the vocal range. A classically trained singer who sing pop songs, have the advantage to apply this technique for the purpose of adding the texture in terms of tone colours to the song since pop songs are generally plain in texture.

4.4.4 Transition

Morrison (1994) indicated that the full range of the voice can be achieved by competent skills in manipulating the different registers with an imaginary concept of no ‘ceilings’ or delimited boundaries, but only the consideration of points of transition. Participant 1 shared her issues in the low to high transitions:

For me, the common issue is my transition and passaggio. This is because when we transit from one register to another quite difficult for me because there’s a break and for me the main goal for the singer is to have a smooth transition.

The findings argued that the mind set of non-classically trained singers in Malaysia feel the pressure at the onset, feeling nervous and lack of confidence; and often in time of performing as song especially at the high note’s part, it is often “flatten out”. Participant 1 later commented that:

That's why I said I took 4-6 years to get that smooth transition. Many of my students have the same problem and actually it's normal but it takes time to develop that technique.

When changing between modes it is important to realise the transitions can vary with pitch. If the transitions are to be inaudible, there are areas within the modes that are better suited to a change (Sadolin, 2000, p.138). Such impurity of vowels, blurring and smearing of phonemes into indiscriminate transition sounds, early anticipation of consonants or heavy leaning on them, exaggeration that hinder easy articulation; are hindrance to maintain a synchronized, controlled and consistent flow of breath (Miller, 1996, p. 19). Participant 3 specified his problem as what Sadolin (2000) has explained:

A common issue for me is the highest note. My voice is baritone. So, for baritone it is a relatively low tone, lower register. So, the lecturer will train me with the songs given.

Usually the transition area overlaps; sometimes referred as 'passagio', during a certain registration where the breaks will occur. These areas are often called the breaks as explained by Participant 3:

For example, 'caro mio ben'... the highest note is B flat. During vocal warm up, Prof usually warms up until the highest note...higher than the B flat. For example, until C. although uncomfortable, at the least I can reach the note.

Participant 3 summarised his problem after he had understood it and know how to solve it:

So, if we want to sing the song, it will be easier. So, for me, the hassle of singing classical is the highest note and also dynamic.

He later on concluded that:

In classical especially the baroque piece too straight forward, cannot be legato. So, that's the trouble. First is lip trill, bubbling, hissing, staccato, aspirato, which is to relax our muscle.

Many standard pedagogical suggestions for achieving legato do not get to the crux of the problem. For example, the suggestion to “bind” one note to the next often results in rigid vocal timbre, where airflow was held back to achieve legato (Miller, 1996, p. 122).

Hence, it is suggested that transition technique is exclusive to pop singers. As explained in the previous sub-topic of placement where pop singers use head voice in their singing dependable on the type of songs. Therefore, pop singers cannot use the head voice method fully because classical singing’s nature is rounded while pop is more independent. So, if the classical method head voice were use in pop singing in its full extend, the song will sound awkward. Thus, if pop singers were to use head voice, blending the head voice within the transition technique through belting is required.

4.4.5 Breathing

Shewell (2009) stated that ‘breathe support’ indicates an excellent breathing with well-coordinated voice production which is essential for singers. From her personal opinion, Participant 5 concurred that breathing is the utmost important aspect in singing. She said that:

If I have a protégé the first thing that I will teach him/her is to control their breath support and the placement of notes registry.

When singing a fast-paced song, there is another way to hold the breath in a flexible way. The consistency of the tone when the breath has flexibility would make the singer singing a fast-paced song without having any hiccups with tone consistency. She further elaborated her claims:

My reason for that is like I previously said; pop singing nowadays has change because of the general public.

In the Malaysian context, it is not merely focus on the voice in terms of ability and singing wise. With the advancement of modern technology, the general public cannot differentiate an artist who has natural talent in singing because technology can cover a lesser singer in their singing. Further, in reality of the current music industry is all concerned about the business, pretty faces and wonderful features are the main criteria to success. Participant 5 explained her reason:

And modern composers prefer to listen and compose a fast beat type of song with less melody in the verse's part but with a catchy hook/chorus.

She continued and further explained:

So, like I said previously to this will cause trouble to singers who intend to sing pop song to today's market.

She stated that:

Because of the obvious interval of note registry from one part to the other and breathing support's technique will help them to implement the correct note placement.

According to Morrison (1994), the technique for breath control in singing is to strike a balance moderating the pressure of exhalation and the intended subglottic pressure. It is not easy to sing classical song and it needs proper technique, proper breathing support, and for get the best song. Participant 1 added her statement in support of Participant 5 by claiming:

I think every singer or even those who play wind instruments need a very good breathing technique. So, when we have a strong core, I think it helps the singer, does not matter what genre which we want.

Participant 4 briefly shared her experience:

Throughout my experience I found out that learning classical singing helps me to sing pop song to the highest level because I manage to control my vocal delivery through breathing, placement of note and range through articulation and dynamics.

The basic notion for singer to ponder on breathing technique and voice placement is to generate the breath through the respiratory system to produce and maintain a designated pitch. It needs more strong projection as in the earlier classical times though without technology, yet the singers then had a strong breath support (Sadolin, 2000, p. 26). Sets of muscles known as quadratus labarum are found in the loin; and these muscles tighten to assist the abdominal muscles. Singers can locate these muscles by curving the back and straightening by pulling in the lumbar region. Feeling how the muscles of the loin work enable them to make the abdominal muscles work. Support is one of the basic elements in all types of singing.

Therefore, the breathing technique is the key to all of the previously mentioned vocal techniques because without a proper breathing, the success of implementing other techniques in singing is very slim. In classical singing, the singers need to know and plan their breathing for the purpose of articulations such as staccato, trills, accent, tenuto, fermata and others.

4.5 Vocal Health

Vocal health is essential for everyone, especially for the frequent voice users like singers, teachers, host and others. The voice must be of proper care and unlike the other instruments that can bring to the shop to fix it. It is the endowed instruments for the singers to be well taken care of. For singers, proper vocal warm-up and technical exercises are essential to avoid straining the voice. A variety of effects can impact their voice if neglected the importance of vocal health.

4.5.1 Vocal Hygiene

Vocal health like avoiding dry throats can be monitored by a quick fix at home using a humidifier to maintain the levels of moisture in the home environment (Wright, 2013, pp. 19-21). To further maintain the vocal health, awareness of weather change is vital too, to equip with proper dressing to avoid the unpredictable adjustment to the weather and temperature changes of a new place.

Wright (2013) stated that singers must be alert to the weather changes as traveling is common for singers, and frequent exposure to various climatic and temperature fluctuation. It is vital for singers to keep their voice healthy sustainable throughout their lifetime and maintaining vocal hygiene. The lifestyle of proper vocal hygiene ultimately affects the quality of their performances. Singers affected by allergies may subject to unpredictable and unresolved struggles throughout their performing careers. It can be disturbing as some suffer the seasonal allergies, while others are affected continually throughout. It was suggested for the ageing singers to consider easy exercises like swimming and walking. The busy practice and performance schedules with hours of singing, the singing conditions and environments are subject to possible exposure to irritants, illnesses, medications, and travel frequency. Bohlender (2013) reflected that to prevent scarring, and other vocal injuries, singers must take heed

of the prevention and if injured, to allow time for the voice to heal. Participant 1 is the first to mention about vocal disorder, she elucidated that:

To me, the easiest way to take a good care of our voice is to get enough sleep and make sure to drink a lot of plain water.

Plain water is a good example but in a specific explanation especially during performance, it is suggested for vocalist to drink mineral water instead of drinking water since a vocalist or a speaker or as a normal human being, when we speak and sing, we breathe through our mouth. This will dry up the saliva in the mouth which will cause problem to the laryngeal area. Her reason for her actions is based from the following's clarification:

Because less consumption of those two could lead to voice disorder/ laryngeal problem such as sore throat and lack of energy so it will obviously disturb our concentration and vocal abilities during performance.

The lesser hours a person sleeps, the lesser the energy that a person can consume. Too much hours of sleeping are also bad because we use too much energy and the consumption of it will affect our entire body. So, it is advisable to have enough sleep which for a normal working adult is around 4-8 hours. During performance, a vocalist's job is not just to sing but also trying to entertain the crowd; so, more energy is needed. Participant 3 offered his own statement said that:

First take care of sleep and need to rest enough. Besides singing, sometimes we also have other work and use voice to talk and so on.

Participant 3 advised:

Be careful on using our voice in our everyday conversation because if we overuse it, it could damage our voices. For example, the heavy usage of whispering and screaming could change our vocal range and tone.

Participant 3 further explained that germs can be transmitted airborne through the hands to the mucous membranes from touching the eyes or nose. As suggested, and common sense, carrying a portable hand sanitiser always and use it frequently and necessarily. Good habits of hand washing and sanitizing are extremely important. As the vulnerable environment that has a threat to the health and body can similarly affect the sensitive vocal folds. Hence, a singer, be it classically trained or pop need to have a proper timing of rest, and consume balanced diet, maintain a natural dynamic to prevent vocal disorder.

4.5.2 Environment

Work environment is a highly competitive atmosphere which can be burdened with heavy responsibilities, excessive workloads, strained collegial relationships, and uncertainty of redundancy. Similarly, in the home environment, the interpersonal dynamics within the family can be demanding and complex too which arouse negative moods like anxiety, anguish, irritation and bitterness. These undesirable negative emotive variables are vulnerable to potential physical tension. These factors hold true to all young and old. Fawcus (1991) suggested that empathy and imagination are essential qualities to release stress and ease tension (p. 141). Hence, it is important for singers to consider a conducive working and home environment to prevent the damaging effects of these causes. Participant 4 made a claim on vocal fold by stating:

Vocal fold consists of a thin layer of tissues. These layers of tissues can be injured, inflamed or discomforted.

She then further substantiated her claim and clarified that:

So, how voice problem occurs? For me, in terms of environment condition, for example home/workplace where are noisy, dusty, dry or being exposed to chemicals.

Smoky environments of second-hand smoke may cause drying effect upon the vocal tract which induce discomfort and irritation of the vocal mucosa. The allergy to dust, mould, or other irritants and affect singing profusely Vaughn (2001) reminded to be extremely watchful in the environment filled with artificial smokes and fogs, which is a deliberate form of air pollution. For the singers, it is a norm to be confronted with the dramatic effect, with artificial smokes and fogs which are vulnerable dangerous to singers as they contain toxic airborne chemicals.

Another factor that can cause a singer a vocal health problem is the cold. Though rarely lead to damage and voice loss, colds are chronic laryngitis which can result to irreversible voice problems. According to Shewell (2009), colds and throat irritants can be the negative effects from long term smoking, alcohol intake or undesirable environmental factors. The prolonged damage to the vocal folds can occur through those unhealthy environments which induce thick, dry, rough and inflamed mucus. Participant 5 stated that cold from air conditioning can also affect a singer's voice especially in a long period stay of a particular room and place:

I can't be in an air conditioning room for a long time. So, I will bring my shawl or jacket to keep myself warm.

She defined her practice on the product that she took:

Honey and warm tea will always be in my bag when I am travel. To prevent from vocal cords infection organically.

Noisy environment especially in loud parties or concerts have high risks in straining a singer voice. Singers are prone to these substances than other stage performers and musicians as singers usually inhale the air more deeply, and slower expel of breath (Vaughn, 2001, pp. 54-55). Thus, it may derive undesirable consequence with higher concentrations of toxic chemicals remain in the lungs for a longer time.

Hence, our surround environment has high risks in affecting the voice not just vocalist but general public too. So, it is very important especially for vocalist to keep a close tab on their surroundings such as the temperature change from the weather, places with noisy environment, dusty and industrial places because those places have a high percentage to cause vocal disorder.

4.5.3 Food consumption

It is an advice for the singers to avoid inappropriate dietary products that may trigger vocal symptoms, such as spicy foods, citrus products, pungent smell fruits and vegetables, caffeine and alcohol. It is also sensible to eat smaller meals and reduce the fat intake. High consumption of fluid is vital to flush toxic from body infection and also to remain hydrated. Vaughn (2001) stated that, to reduce post-nasal drip from cough and throat-irritation, a singer needs to raise his/her bed's headrest higher for the gravity to ease food digestion. And, with the permits of the doctor, a considerable dose of antacid before bedtime is permissible. Participant 1 explained on her routine prior to a performance:

What I would do if I have a performance is that prior to a week before I will forbid myself to eat and drink that which can affect my voice especially foods that contain a lot of oil and spices.

Then, participant 1 stated her reasons:

... Generally, most singers do not care about the nutrition that they consume.

Then, she briefly stated that:

They are more focused on vocal warm up but actually it does give a rather bad impression if we do not care for it since our body is a part of our instrument. So, of course we have to care about the nutrition (food) that we take.

Participant 1 also added the followings statement to support her previous reason:

Every singer has a taboo. There may be food that can and cannot be consumed.

She gave her example as the following:

Like me, I cannot drink coffee because it will make my throat hurt but actually, it is up to every singer based on their belief and needs.

Participant 1 then added the following to conclude her statement:

As I said I was concerned about food especially things that can generate liquid.

Another example was given by Participant 1 as summary:

For example, I will avoid any drinks that contain too much amount of sugar maybe a week or two three days before the show. That's what I always do.

Participant 3 has his own preference on food consumption:

For me, I just discipline myself in terms of eateries. As I said earlier avoid eating oily, spicy foods, less drinking cold water.

He then explained on his taboo where it is totally the opposite of Participant 1:

Some singers have no taboo in nutrition. For me the antibody of everyone is different.

Participant 3's preference contradicts Participant 1:

For myself, in fact I have no problem eating greasy or spicy food. But if possible, I will take care to avoid damage to the voice for me is easy but need to work on it.

According to Vaughn (2001), it is important to consume lots of fluid throughout the day, and diligent avoidance of caffeinated drinks to prevent dehydration or aggravate reflux. Further, to maintain a healthy weight with balanced diet and sustainable routine in exercise is desirable. However, it was warned not to make attempt to lose weight abruptly through fasting or unhealthy diets.

For voice care, vocal expertise advice singer to avoid a colder temperature after the consumption of alcohol as it may risk catching a cold. Some experts also suggested drinking sufficient water daily is essential for singers; and to maintain a well-balanced diet consuming vegetables, and fruits. From the nutrition expertise, it is also advisable to avoid dairy products and acidic drinks that cause excess phlegm. Hence, food consumption for vocalist is different from one vocalist to the other, as one's metabolism is different from the other. Further, the body of one particular vocalist works differently to the other. For an example, some vocalists are able to consume spicy food but not affecting the singing quality. So basically, food consumption depends on one-person interest and capability; there are no hard and fast rules on what to do and not to do.

4.5.4 Medicine

Medicine misuse, example consuming Aspirin, which used in thinning the blood may cause vocal haemorrhaging, particularly if it is consumed when one is prone to coughing. According to Vaughn's (2001) descriptions, medication like antihistamines and oral decongestants can cause dryness and thicken the secretions, which in turn

expose the vocal folds to the vulnerability of injury. In addition, it was also known that consumption of some birth control pills may cause vocal problems that subject to the changes in vocal range and character. Participant 2 explained his experienced about how his body letting him down before a performance:

For me, care of your body because if our body is weak, or in other words unhealthy, fever, or cold, flu, it will affect our singing.

He then explained the steps taken in overcoming it prior to that particular performance:

Everyone has different antibodies. Some people can eat spicy, drink cold water; still can sing and some people cannot. So, please keep our inner always healthy.

Participant 5 have a lot of experiences during her days in the industry, she stated that:

I will get good sleep at least a week before the performance. Other than that, I will eat foods that will give me energy and that are good sources of protein.

She then explained her reason:

For me, I have been always drinking a good amount of water, at least at every hour of using my voice.

Participant 5 added more input on the usage of pharmacist-controlled drugs for vocalist:

I do take pills or liquids when it's necessary like if I am suddenly lost my voice in 2 days' time before my show.

She advised that:

It works wonders. But it is not supposed to be a major solution for a singer to heal them self.

She cautioned that it is not healthy for vocalist to take it:

We are not supposed to depend on the chemical and drugs to cure ourselves. Our instruments are our body and it's very sensitive. A natural remedy is still the best way to protect it from harm, I think.

Medicine use; if health condition does not improve, it is important to visit a voice specialist and/or gastroenterologist. Vaughn (2001) again warned and advised that if once been diagnosed with nodules, it is always advisable to schedule periodic medical check-ups or pay regular visits to speech-language pathologist for therapeutic treatment. It is important to consult the voice specialist about the risks of surgery with the physician. These conditions may in consequence of voice deterioration of unforeseen expectation. Wright (2013) indicates that medical consultation for a treatment is the best solution and voice therapy program that eradicating abuses in the speaking and singing voice are recommended too. Participant 5 gave some tips on how to naturally taking care of her voice:

I will go for natural remedies to be honest. As mentioned before, honey and warm tea in the morning, coconut water to cool down my temperature.

In addition, Participant 5 explained her reason:

I will inhale a hot water vapour to dilute phlegm and mucus. And only if I have to like I previously said then, the last resort will be pills for sore throat and coughing.

Participant 2 stated his claims based on his experienced as an up and coming industry performer:

The pros are it restores our voice quickly. But the cons are that injection or those pills actually is not good.

He then explained his reason:

If we keep addicted in taking pills or injection, it will affect you when the time comes.

He summarised that:

Which is good when we take injection at that time, our voice will continue to recover and can deliver the song well.

Thus, medication for vocalist is only applicable when needed. Just like any other medication, drugs can be harmful to if it is over consumed. In consequence, once it is dependable on the dosage of drugs in performing it could affect the performances when it is without, and may results in addiction since drugs may enhance stage performativity and help overcome performance anxiety.

4.5.5 Vocal disorder

Boone (1991) indicated that when voice disorder is diagnosed, it is important to consult a specialist with immediate action, especially when an unexplained hoarseness is identified. Shewell (2009) stated that some people just take risk and leave the hoarseness unattended for a long time. This carelessness may in consequence of husky voice and lead to serious issues without urgent treatment. Fawcus (1991) said that though not all voice users experience vocal issues and problems, nevertheless, excessive tension in vocal fatigue and other discomfort in the vocal mechanisms should be attended urgently with therapeutic intervention.

Vocal disorders can be disruptive for vocal professionals in the career sustainability. Singers rely entirely on their voices, and their awareness of the symptoms in vocal disorders is imperative. Speaking loudly, excessive talking are all threats to singers who at the same time, with undue usage for the voice for their profession.

Participant 2 stated that:

I will also try not to talk too much; in other word reducing my tone and loudness as much as possible so it won't worsen.

He supported his claims and stated:

I'll definitely avoid whispering as well because it will worsen the state of your already problematic laryngeal.

All participants agreed that the tremendous amount of extra air forced over the vocal cords will be caused dryness and irritation; and the damage is more dangerous as compare to screaming or shouting. Participant 2 explained:

Such as hoarseness or it could just make you lose your voice altogether and not a lot of singers paid attention to that.

Participant 4 indicated that:

The most important things that singer should know is when you have a laryngeal problem; do not whisper because whispering puts stress on the vocal folds.

She stated that:

Those folds tighten and strained when you whisper, and it does not allow the vocal folds to vibrate, it is an unhealthy, resonant sound.

Vocal abuses are behaviours that strained vocal use with excessive loudness; screaming and other inappropriate vocal noise making. Singing in an uncomfortable

range, in unfavourable environments, or prolonged singing may develop voice disorder. Vocal disorders are extremely common among singers; if not treated properly and timely, it may be disastrous to their career. According to Wright (2013), voice disorders are generally correlated to vocal misuse which initiated with inattentive mild hoarseness and later manifested to a complete vocal loss.

As a result, vocal disorder is a problem if vocalists are ignorant to issues specified and mentioned in the previous sub topics. The overuse of whispering, excessive talking, shouting, screaming and other prohibited actions to the voice are the main reason of vocal disorder.

4.5.6 Vocal misuse

Vocal abuse and misuse are the most the prevalent types of voice disorders. Anyone, professionals and non-professionals in vocal practice, who has excessive use use of their voices may develop a disorder as a consequence of vocal abuse (Parker & Parker, 2002, p.11). Participant 1 mentioned in her interview that the laryngeal problem can be solved if a singer practices the following method:

To me, the easiest way to take a good care of our voice is to get enough sleep and make sure to drink a lot of plain water.

She then explained her motive about her method:

Because less consumption of those two could lead to voice disorder or laryngeal problem such as sore throat and lack of energy so it will obviously disturb our concentration and vocal abilities during performance.

Participant 3 stipulated that singers who have problem need to see or consult a professional in the field of laryngologist:

First of all, as a singer, we must get advice from a qualified person. For example, our own lecturer or we seek advice from a specialist doctor about larynx.

Participant 1 is an expertise on larynx. She explained her knowledge based on prior experiences gained from professional in the field of laryngologist:

In case if we have major problems with our vocal cord either, there are nodules, swollen, breathy, or we cannot sing in high tones, our voice will be bigger or it suddenly makes you hard to sing.

Participant 1 concluded that:

So, Prof will advise and recommend stopping singing in a long time that is within 3 months. Within 3 months we will undergo vocal therapy with a qualified doctor or a qualified lecturer in that field.

Therefore, vocal misuse is prevalent and preventable type of voice disorder where anyone could be affected by it. The uses of voice excessively may develop from abusing the vocal which relates to vocal disorder. The most common practice that a vocalist did was during performance where they failed to control high notes in their singing which a high percentage could affect laryngitis, vocal nodules, vocal polyps, and contact ulcers.

4.6 Relationship between Vocal Health & Vocal Techniques

As conclusion of the findings, all participants specified that it is crucial to take care of vocal health to serve good classical singing techniques. Some of the aspects that might affect vocal health included: (1) environment; (2) food consumption; (3) medicine; and, (4) vocal disorder.

The participants advised the singers to have deeper awareness of the environment and always be prepared or undesirable conditions. It is noted that when

lacking in preparation, the vocal might be in shocked in adverse environments. It should be taken in great care of the larynx mindfully. By failing to do so, the carelessness could cause a failure in registering a particular note to the correct pitch or the voice could sound hoarseness and breathy. Discipline oneself in good health is vital in attaining the finest in performance success.

As suggested by the participants, prior to achieving a healthy lifestyle and the well-being of the vocals, proper and well-balanced diet is essential even some singers might not take heed of its importance. But, as a vocalist and a performer, a healthy diet is essential as the foods we consumed may subject to various mixtures of chemicals. Spicy and oily foods will cause problem in transition of smoothness, consistency and pitch. It is advisable to be diligent with proper diet to promote good health to achieve performance finesse.

All the participants cautioned the use of medicine, indicated that though it may help singers to perform and sing a particular song with the right techniques very well but to be aware of the side effects. For an instance, vocal range might slightly change; the singer's tone might have been altered in terms of complexity and thickness. Therefore, medicine will only consume when necessary and appropriate.

The participants also remarked that our everyday conversations played a major role to the character of our vocals. They observed that, it is vital for vocalists to avoid redundant behaviour during conversation, such as talking excessively and whispering. They explained that this could tighten up and strain the vocal fold and affect the resonance. They reasoned that to achieve a proper placement, the production of voice started from the larynx to the nose. So, if the vocal fold has been strained and tightened up, the production of the voice is unable to reach the possible placement to project the correct resonance. Thus, singers are advised to practice speaking in proper manner

during conversation and to avoid excessive talking, whispering, prolonged yelling and talking, may cause damage to the vocal. In conclusion, vocal health is considered as the key to singers' vocal techniques for effective warm up such as lip trills, bubbling, tongue trills and other types of vocal techniques.

Universiti Malaya

CHAPTER 5

DISCUSSION, IMPLICATION AND RECOMMENDATIONS

5.1 Overview

This chapter presents the summary and discussion of findings of this study. The summary of the result is organized as follows: (1) warm up; (2) vocal techniques; (3) vocal health; and (5) the relationship between vocal health and vocal techniques.

5.2 Summary of the Results

The purpose of this study was to investigate trained classical singers singing pop music among the professional singers in Malaysia in order to investigate the difference in preparation of warm up between classically trained singers and non-classically trained singers. The ancillary purpose of this study is to compare the difference in vocal techniques in classical singing and pop singing. The findings aim to describe the relationship between vocal health and vocal technique in classical singing and pop singing.

The methodology used in this area of study is the qualitative, descriptive research method and consists of descriptions of an exploration about classical singer singing pop song based from its techniques and vocal health. Five professional singers who are working in the industry; as the researcher focus on experiences in both teaching and performances among the identified classically trained singers in Malaysia has been interviewed with questions that covered the area of vocal warm up, singing in both classical and modern, and a discussion about the particular topics. Furthermore, the data have been collected. All the data that have been collected was the used to the analysed based on both research questions and research and the purpose of its studies.

5.3 Discussion of Findings

Based on the analysis data of Chapter 4, the results revealed that classical trained singers can perform and sing very well in pop music's genre. The discussion below summarised the following findings: (1) preparation of warm up (2) vocal techniques and (3) relationship between vocal techniques and vocal health for both classical and pop.

5.3.1 Preparation of Warm Up

In classical music, Sadolin (2000) stated that in a breathy attack, singers are allowed for having some air to pass through the vocal cords before they assemble it for sound-production. This air is clearly heard as an H-sound prior to the note. This method of attack is used in words such as 'house', 'hundred', 'horse', and 'hey' also clarifies that the increasing of the volume is called crescendo meanwhile; decreasing the volume is called decrescendo. Particularly, when singers want to sing a crescendo or a decrescendo, it is very important for them to have sufficient support because by contracting the soft palate is to raising the palate and it is known extended like a sail. Similar to wind instrument players, a strong core is needed in order to apply the breathing technique to works because during a performance, singers have to stand in front of the stage for a longer period of time and some repertoire; depending on the type of genres, requires difference vibes so, without the correct technique of breathing, singers will not be going to be able to pull off an excellent performance.

In pop singing, female singers in particular perceivably produced difference sound in the approximate range of D4-D5 in most of the available musical genres and "belting" is often referred to as an approach to pop singing. Studies by Schutte and Miller (1993) and Hogikyan, Appel, Guinn, and Haxer (1999) indicated that for the singer to do the belting technique, the level of experience, and their beliefs about

causative factors, career impact, and optimum treatment to one's vocal health are vital. It is proven that for a singer to find the correct range needs time and plenty of practice and exercises in order to get a result. This is because some singers might have common issues of their own in order to get the clean tones as for example, having a large and breathy sounds for both classical and pop singers. In order to get the preferred result, classical technique warm up is the key to achieving it so, as a pop singer they need to at least have the proper foundation of classical singing techniques.

5.3.1.1 Posture and Alignment

According to O'Bryan and Harrison (2014), generally contemporary singers often move along to the rhythm while performing so, thus, flexibility and dynamic are very important (p. 36). The implication of posture for vocal efficiency includes the "resolution of problems of alignment and posture" (p. 5) which suggests notable significant improvement in the projection of voice.

5.3.1.2 Breathing and Support

Baxter (1989) an American rock specialist stated that singers breathe as natural and ease like normal speaking and speech. As stated by O'Bryan and Harrison (2014), in classical singing, the legato phrases are common practice; while on the contrary, in popular music, the vocal phrases are generally presented to express the lingo of its lyrics (p. 38). Sadolin (2000) stated that the advantages of an efficient support technique can help singers on linger notes, an even tone production, larger vocal range, no hoarseness or wear, greater volume, control of vibrato and control of pitch (p. 23).

5.3.1.3 Tone

In the music industry, the terms that are traditionally used to determine the meaning of tone are as follows: (1) chest voice; (2) head voice; and (3) falsetto. Meanwhile, other sector of the vocal communities ranging from classical, musical theatre, contemporary, and, others refer it as a selection of voice qualities, settings and registers to “mix voice” and “belt”. The goal of all healthy singing is depending on the establishment of an effective, supportive, stable, permitted, intonation and an efficient range of vocals (O’Bryan, & Harrison, 2014).

5.3.1.4 Diction

Diction is also known as slang or a speech-like pronunciation in the conversational style particularly in the pop music. The tongue and lips which work as the primary articulators worked the hardest where the used of percussive effect and rhythmic energy in consonants especially in the styles of pop, R&B, Funk, and rap (O’Bryan & Harrison, 2014, p. 41).

5.3.1.5 Belting

Also known as “high chest voice” among the non-classically community, belting is defined as a specific technique of singing in terms of proper proportions of the lower and upper resonances. It is a controlled and sustained phonation which is similar to yelling. Other than that, the use of a register within the technique of belting is descriptive (Henrich, 2006). Soto-Morettini (2006) described that belting also can be used to highlight the emotional state of a singer depending on the particular repertoire (pp. 43-46).

5.3.2 Vocal techniques

In classical music, the vibrato technique is a basic and alluring element of the established performing voice. According to Mitchell and Kenny (2010) for a tip top singing understudies, accomplishing and creating vibrato may constitute one of the fundamental components of their vocal preparing, in spite of the fact that it is not really a concentration of that preparation. This is prior to all classical singers cannot run from vocal techniques because the entire resume of vocal techniques is very important as it have all the various range that a singer should practice in order to become a well talented and all-around performer.

Lamperti (1905) suggested that the Classical singing, especially bel canto, the warming up includes placing, developing, and equalizing the voice to achieve an essential in acquiring the foundation on tone quality. The bel canto techniques seek to develop the sublime of the singer's voice to the concept of beautiful sound. So, techniques that differentiate classical and pop are classical singing technique, imaginary with a yawn.

Meanwhile in pop singing, Sadolin (2000) suggested that women particularly use curbing when they are unable to move higher than d2 in overdrive where volume are not to be overly exerted as in Belting. The higher the voice resulted the required volume. It is important to take heed and be controlled in singing less powerfully in Curbing as it may have resulted a full metallic mode (overdrive or belting). When singers produce high and low notes the vocal cords are tightened and relaxed by the movements of the arytenoid cartilages and a number of muscles.

According to a conducted interview from a male singer perspective whom voice happened to be a baritone, he can only reach the note of B flat as his highest note. A specific exercise is needed in order for the singer to reach the highest note higher than B

flat and they are accordingly done to relax his muscle as follows lip trill, bubbling, hissing, staccato, and aspirato.

Bourne, Garnier and Kenny (2012), commented on the survey on the topic of singing teachers' understanding of the music theatre pedagogy and styles conducted by LoVetri and Weekly (2003) stated that the results only indicated 56 (45%) of the 124-respondent theatre singing teachers had somewhat training in the genre. Most teachers have limited training and professional knowledge in non-classical singing pedagogy especially when most of the voice pedagogy training focusses on classical voice production.

In today's pop genre, most singers are increasingly creative in delivering each song. It is not possible that a classical singer could become a commercial singer based on classical singing style. For example, from the interview that have been conducted, one of the participants mentioned about Syafinaz Selamat; educator and industry performer, where although she is popular as a commercial artist, she still remains and use the classical techniques in her singing for various style while singing pop songs. For me, depends on the singer. If the singer wants to keep her identity as a classical singer, she remains and if she wants to get to the band or else it's up to their self-esteem and the identity within the singer.

5.3.3 Relationship between vocal techniques and vocal health

This section presents a summary of data collection, discussion of findings of this study and conclusion based from the issues of vocal techniques and vocal health.

5.3.3.1 Vocal techniques

Wright (2013) suggested the singers to take heed of the changeability in weather in the frequent traveling and to retain the voice in good condition. It is emphasised that the sustainability of a healthier voice will protect and maintain it for a prolonged time. The key issue in vocal health that affect performances include the immediate treatment of allergies and proper lifestyle with vocal hygiene. Singers with allergies usually confronted with constant struggle throughout their careers.

From the findings of the study, it is summarised that, vocal techniques include: (1) posture and alignment; (2) breathing and support; (3) tone; (4) diction; and (5) belting. All interviewees agreed that posture and alignment is the most important technique which is the same requirement and expectation of all singers. However, O'Bryan and Harrison (2014) indicated that it is more challenging for pop singers as they often move along with the rhythm while performing.

5.3.3.2 Vocal Health

The following summarized the findings of the study on vocal health among the classical and pop are similar which include excessive talking, screaming and yelling; throat clearing, coughing and inhaling irritants; smoking and misuse of the vocal cords. These can result in temporary or permanent damages in function, vocal quality, and deadly, the possibility of voice loss.

5.4 Conclusion

The findings from this study indicated some noteworthy conclusions. Firstly, Classical warm up is very important for both classical and pop singers prior to sing a repertoire in the particular performance. Notably most participants from the interview stated that

bubbling, lip trills, tongue trills, hissing, staccato, aspirato and open throat as in yawn are all important to develop the voice before their performances.

Secondly, majority of the participants agreed that breathing is the most important technique since it is the backbone to support the voice projection. Without a correct breathing technique, registry in tone placement, transition, range and pitch will undoubtedly be impossible to project.

Thirdly, all of the participants also agreed that vocal health played a major part for singers' vocal techniques because without it none of the warm up such as lip trills, bubbling, tongue trills and other types of vocal techniques could not be successfully done. So, most of the participants suggested that it is important for singers to take care of their health because without a good health they will not going to be a great performance.

5.5 Implications of the Study

The implication of this study is about a classically trained singers singing pop song. The findings of this study suggest that classically trained singers are well-rounded in singing both in classical and pop genres because of the techniques that they have mastered and practice to be a trained vocalist.

First, the study shows that all participants are trained classically and have some kinds of experienced in both education and music industry singing pop songs. This is an important finding as it indicates that it may help music educator in enhancing their professional development for their students in teaching both theoretically and practically.

Secondly, the implication of this study is to help and guide the non-classically trained singers who are majority of them are in the music industry here in this country

so they can improve their application of knowledge and helps to better their singing technicality and their performances

Thirdly, from the findings of the study, it shows that singers; as a normal human being, we need to take care of our lives by living in an environment full of harmony. In order for a healthy living, the consumption of food that we eat need to be controlled and watched overtime.

5.6 Recommendation for future study

This study focusses on professional singers in Malaysia in which their performance quality is much experienced. But it is essential and important for the singer to use the proper singing techniques to ensure the singing quality by reaching its standard as how the researcher described as beautiful and powerful.

This study has attempted to prove that classically trained singers can sing pop songs better than the typical pop singers who are in the music industry. Therefore, it is suggested that future educator and students to conduct a further study on other topic that is relevant to classically trained singers to be investigated in future studies.

This study has provided suggestions in vocal techniques and vocal health. Future research should include an investigation of endoscope procedure as the vocal point to understand on how a singer's laryngeal problem in a more thorough and specific method.

5.7 Closing Remarks

Overall, the study contributes to the body of knowledge in vocal techniques and vocal health. It provides evidences for most singers on the important of vocal techniques and vocal health. It implies that vocal technique is very important for singers while vocal

health is required to perform the previous-mentioned technique. Combining the findings from this study provides some new ideas for further study and future research.

Universiti Malaya

REFERENCE

- Aguilera, C. (2018). *Christina Aguilera: Trick yourself into hitting the high note*. Retrieved June 23, 2019, from MasterClass Moments: https://youtu.be/qI_8weNgpZc
- Barnett, J. R. (1979). *The churches of Christ: Who are these people?* Lubbock, TX: Pathway Publishing House.
- Baxter, M. (1989). *The rock-n-roll singer's survival manual*. Milwaukee: Hal Leonard.
- Behlau, M., & Oliveira, G. (2009). Vocal hygiene for the voice professional. *Current Opinion in Otolaryngology & Head and Neck Surgery*, 17(3), 140-154. doi:10.1097/moo.0b013e32832af105
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. London: Sage Publications.
- Bohlender, J. (2013). Diagnostic and therapeutic pitfalls in benign vocal fold diseases. *GMS Current Topics in Otorhinolaryngology - Head and Neck Surgery*, 12, 1-19.
- Boone, D. R. (1991). *Is your Voice Telling on You?* San Diego, CA: Singular.
- Borch, D. Z., & Sundberg, J. (2002). Spectral distribution of solo voice and accompaniment in pop music. *Logopedics Phoniatrics Vocology*, 27(1), 37-41.
- Bourne, & Garnier. (2012). Physiological and acoustic characteristics of the female music theater voice. *The Journal of the Acoustical Society of America*, 13(2), 1586-1594.
- Bourne, T., Garnier, M., & Kenny, D. (2011). Music theater voice: Production, physiology and pedagogy. *Journal of Singing*, 67(4), 437-444. Retrieved from <https://openmusiclibrary.org/article/79154/>
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage Publications, Inc.
- Brown, O. L. (1997). *Discover your voice*. San Diego: Singular Publishing.
- Carroll, T., Nix, J., Hunter, E., Emerich, K., Titze, I., & Abaza, M. (2006). Objective measurement of vocal fatigue in classical singers: A vocal dosimetry pilot study. *Otolaryngology—Head and Neck Surgery*, 135(4), 595-602.
- Celani, L., Wolfe, K., & Marienfel, S. (1998). The tradition of Florentine bel canto. *Executive Intelligence Review*, 25(35), 30-35.
- Chandler, K. (2014). Teaching popular music styles. In S. D. Harrison, & J. O'Bryan (Eds.), *Teaching singing in the 21st century* (pp. 35-51). Dordrecht: Springer.
- Chapman, J. L. (2011). *Singing and teaching singing: A holistic approach to classical voice*. Plural Publishing.

- Chernobelsky, S. I. (2007). The treatment and results of voice therapy amongst professional classical singers with vocal fold nodules. *Logopedics Phoniatrics Vocology*, 32(4), 178-184.
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). London: Routledge.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Cynx, J., Bean, N. J., & Rossman, I. (2005). Testosterone implants alter the frequency range of zebra finch songs. *Hormones and Behavior*, 47(4), 446-451.
- Davids, J., & LaTour, S. (2012). *Vocal technique: A guide for conductors, teachers, and singers*. Long Grove, IL: Waveland Press, Inc.
- Dayme, M. B. (2009). *Dynamics of the singing voice* (5th ed.). New York: Springer.
- Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. New York: Oxford University Press.
- Duke Voice Care Centre. (n.d.). Retrieved from dukevoicecare.org.
- Elliott, M. (2006). *Singing in style: A guide to vocal performance practices*. New Haven and London: Yale University Press.
- Everett, W. A., & Laird, P. R. (2009). *The A to Z of the Broadway Musical*. Scarecrow Press.
- Fawcus, M. (1991). Hyperfunctional voice: The misuse and abuse syndrome. In M. Fawcus (Ed.), *Voice disorders and their management* (2nd ed., pp. 139-175). Boston, MA: Springer.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). New York: McGraw-Hill.
- Fry, H., Ketteridge, S., & Marshall (Eds.). (2009). *A handbook for teaching and learning in higher education : Enhancing academic practice*. London : Routledge. doi:10.4324/9780203891414
- Gish, A., Kunduk, M., Sims, L., & McWhorter, A. J. (2012). Vocal warm-up practices and perceptions in vocalists: A pilot survey. *Journal of Voice*, 26(1), e1-e10.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine Publishing.
- Grant, S. J. (2014). Vocal pedagogy and the Feldenkrais method. In S. D. Harrison, & J. O'Bryan (Eds.), *Teaching singing in the 21st century* (pp. 175-185). Dordrecht: Springer Science+Business Media.
- Hackworth, R. S. (2007). The effect of vocal hygiene and behavior modification instruction on the self-reported vocal health habits of public school music teachers. *International Journal of Music Education*, 25(1), 20-28. doi:10.1177/0255761407074889

- Hamberlin, L. (2011). *Tin Pan Opera: Operatic Novelty Songs in the Ragtime Era*. Oxford and New York: Oxford University Press.
- Henrich, D. N. (2006). Mirroring the voice from Garcia to the present day: some insights into singing voice registers. *Logopedics Phoniatrics Vocology* , 31(1), 3-14.
- Hogikyan, N., Appel , S., Guinn , L. W., & Haxer, M. J. (1999). Vocal fold nodules in adult singers: Regional opinions about etiologic factors, career impact, and treatment. A survey of otolaryngologists, speech pathologists, and teachers of singing. *Journal of Voice*, 13(1), 128-42.
- Hong-Young, A. H. (2003). *Singing professionally: Studying singing for singers and actors*. Heinemann Drama.
- Hunter , E. J., Svec , J. G., & Titze, J. R. (2006). Comparison of the produced and perceived voice range profiles in untrained and trained classical singers. *Journal of Voice*, 20(4), 513-26.
- Hunter, E. J., Tanner, K., & Smith, M. E. (2011). Gender differences affecting vocal health of women in vocally demanding careers. *Logopedics Phoniatrics Vocology* , 36(3), 128-136.
- Jamshed , S. (2014). Qualitative research method-interviewing and observation . *Journal of basic and clinical pharmacy*, 5(4), 87-8.
- Jander, O. (1980). Bel canto. In S. Sadie (Ed.), *The new Grove dictionary of music and musicians* (Vol. 2, p. 420). London: Macmillan.
- Kenny, D. T., & Mitchell, H. F. (2006). Acoustic and perceptual appraisal of vocal gestures in the female classical voice. *Journal of Voice*, 20(1), 55-70.
- King, A., Ashby, J., & Nelson, C. (2001). Effects of testosterone replacement on a male professional singer. *Journal of Voice*, 15(4), 553–557.
- Kumar, R. (2011). *Research methodology : A step-by-step guide for beginners* (3rd ed.). New Delhi: SAGE.
- Lamperti, G. B. (1905). *The technics of bel canto*. (T. Baker, Trans.) New York: G. Schirmer.
- Leavy. (2017). *Research Design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches*. New York, NY: Guilford Press.
- LeCompte, M. D., & Schensul, J. J. (1999). *Designing and conducting ethnographic research*. Walnut Creek, CA: AltaMira Press.
- LoVetri, J. L., & Weekly , E. M. (2003). Contemporary commercial music (CCM) survey: Who's teaching what in nonclassical music. *Journal of Voice*, 17(2), 207-216. doi:10.1016/S0892-1997(03)00004-3
- Magee, J. (2012). *Irving Berlin's American musical theater*. Oxford: Oxford University Press.

- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- Miller, R. (1996). *On the art of singing*. New York, NY: Oxford University Press.
- Mitchell, H. F. (2014). Perception, evaluation and communication of singing voices. In S. D. Harrison, & J. O'Bryan (Eds.), *Teaching singing in the 21st century* (pp. 187-200). Dordrecht: Springer Science+Business Media.
- Mitchell, H. F., & Kenny, D. T. (2010). Change in vibrato rate and extent during tertiary training in classical singing students. *Journal of Voice*, 24(4), 427-434.
- Mitchell, H. F., Kenny, D. T., & Ryan, M. (2010). Perceived improvement in vocal performance following tertiary-level classical vocal training: do listeners hear systematic progress? *Musicae Scientiae*, 14(1), 73-93.
- Morrison, M. D. (1994). Basics of singing pedagogy. In M. Morrison, I. Rammage, H. Nichol, B. Pullan, P. May, & L. Salkeld (Eds.), *The management of voice disorders* (pp. 201-229). Boston, MA: Springer.
- O'Bryan, J., & Harrison, S. D. (2014). Prelude: Positioning singing pedagogy in the twenty-first century. In J. O'Bryan, & S. D. Harrison (Eds.), *Teaching singing in the 21st century* (pp. 1-9). Dordrecht: Springer Science+Business Media.
- Parker, J. N., & Parker, P. M. (2002). *The official patient's sourcebook on vocal cord paralysis*. ICON Health Publications.
- Parker, R. (Ed.). (2001). *The Oxford illustrated history of opera*. Oxford: Oxford University Press.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Newbury Park, CA: Sage.
- Pleasants, H. (1973). Bel canto in jazz and pop singing. *Music Educators Journal*, 59(9), 54-59.
- Randel, D. M. (1986). *The Harvard dictionary of music*. Cambridge, MA: Belknap Press.
- Rhee, Y. (2004). *The employee-public-organization chain in relationship management: A case study of a government organization* (Doctoral dissertation).
- Rosen, C. A., & Murry, T. (2000). Voice handicap index in singers. *Journal of Voice*, 14(3), 370-377. doi:10.1016/s0892-1997(00)80082-x
- Rosine, A. (2018). *Vocal techniques for the instrumentalist*. Retrieved from <https://newprairiepress.org/ebooks/25>
- Sadolin, C. (2000). *Complete vocal technique*. Copenhagen, Denmark: Shout Publishing.
- Sapir, S., Mathers-Schmidt, B., & Larson, G. W. (1996). Singers' and non-singers' vocal health, vocal behaviours, and attitudes towards voice and singing: indirect findings from a questionnaire. *European Journal of Disorders of Communication*, 31(2), 193-209.

- Sataloff, R. T. (2006). *Vocal health and pedagogy : science, assessment, and treatment*. San Diego, CA: Plural Publishing, Inc.
- Sataloff, R. T. (2017). Clinical anatomy and physiology of the voice. *NeuroLaryngology*, 51.
- Schutte , P., & Miller, D. G. (1993). Belting and pop, nonclassical approaches to the female middle voice: Some preliminary considerations. *Journal of Voice*, 7(2), 142-150.
- Sell, K. E. (2003). *The disciplines of vocal pedagogy: Towards a holistic approach*. PhD thesis, Middlesex University.
- Shewell, C. (2009). *Voice work: Art and science in changing voices*. Chichester, UK: Wiley–Blackwell.
- Soto-Morettini, D. (2006). *Popular singing: A practical guide to pop, jazz, blues, rock, country and gospel*. London: A & C Black.
- Stanley Sadie , S., & Tyrrell , J. (Eds.). (2001). *The new Grove dictionary of music and musicians*. London: Macmillan.
- Stark, J. (1999). *Bel canto: A history of vocal pedagogy*. Toronto: University of Toronto Press.
- Stegemöller, E. L., Skoe, E., Nicol, T., Warrier, C. M., & Kraus, N. (2008). Music training and vocal production of speech and song. *Music Perception*, 25(5), 419-428.
- Stokes, W. C. (2010). *The experience of students as part of a secondary school musical theatre course*. Doctoral dissertation.
- Strauss, A., & Corbin, J. M. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Beverly Hills, CA: Sage Publications, Inc.
- Sundbergr, J. (1996). The human voice. In R. Greger , & U. Windhorst (Eds.), *Comprehensive human physiology, Vol. 1* (pp. 1095–1104). Berlin: Springer.
- Taylor, S. J., Bogdan, R., & DeVault, M. (2016). *Introduction to qualitative research methods : A guidebook and resource* (4th ed.). Hoboken, New Jersey : John Wiley & Sons, Inc.
- Titze, I. R. (2008). The human instrument. *Scientific American*, 298(1), 78–85.
- Titze, J. R., Lemke, J., & Montequin , D. (1997). Population in the US workforce who rely on voice as a primary tool of trade. A preliminary report. *Journal of Voice*, 11(3), 254-259.
- Toft, R. (2013). *Bel canto: A performer's guide*. Oxford: Oxford University Press.
- Turner , D. W. (2010). Qualitative interview design: A practical guide for novice investigators. *The Qualitative Report* , 15(3), 754-760.
- Vaughn, S. (2001). A singer's guide to vocal care. *Journal of Singing* , 57(3), 53-60.

- Vennard, W. (1967). *Singing: The mechanism and the technic*. New York, NY: Carl Fischer.
- Vilkman, E. (2000). Voice problems at work: A challenge for occupational safety and health arrangement. *Folia Phoniatr Logop*, 52(1-3), 120–125.
- Vintturi, J., Alku, P., Lauri, E. R., Sala, E., & Sihvo, M. (2011). Objective analysis of vocal warm-up with special reference to ergonomic factors. *Journal of Voice*, 15(1), 36-53.
- Wright, M. (2013). *Vocal disorders and the voice care network*. Report of a Senior Study, Maryville College.
- Yin, R. K. (2017). *Case study research and applications: Design and methods*. Sage publications.

Universiti Malaya