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A CASE STUDY INVESTIGATING PERCEPTIONS ON PROCESS AND OUTCOMES IN APPLYING THE ALEXANDER TECHNIQUE IN VOCAL PRODUCTION

A Thesis

Presented to

Eastern Washington University

Cheney, Washington

In Partial Fulfillment of the Requirements

for the Degree

Master of Arts With Emphasis in Music Education

By

Amanda Dick

Spring 2013

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MASTER'S THESIS

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Abstract

This case study investigated perceptions on process and outcomes of applying the Alexander Technique in vocal production. The setting was the campus of a state university in the United States of America. The perceptions of three levels of participants were investigated – a master Alexander Technique teacher, a collegiate vocal professor and three undergraduate music students, all experienced in the Alexander Technique in vocal production. Data collection included interviews with the participants; documentation in student practice journals, and field observations. Data were analyzed, determining consistent trends between all the participant's perceptions of the processes involved in applying Alexander Technique in vocal production. These primarily involved improving body awareness through "body mapping," identifying physical habits that cause tension, and replacing these with natural freedom in movement. Furthermore, there was parity in perceptions on positive outcomes in vocal production, including ability to sustain notes and increase the range, fullness and quality of the voice. Minor disparities were indicated between perceptions on process, such as specific psychological focus and reference to personality. Links were found between perceptions articulated in interviews, journals and field observations regarding both process and outcomes. The results provide valuable knowledge that, alongside other similar studies, may inform the music education profession.

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Chapter 1: Introduction

Background

The researcher's interest in this field of study developed through her own experience of singing, which began in church choirs from the age of three years and led to her first formal studies in voice from the age of 12. These lessons involved a vocal practice of "belting" in lower range Broadway songs that destroyed part of her vocal range. Despite on-going vocal training through collegiate level, the essential problem continued into her graduate years when a professor directed her to specialized training in the Alexander Technique. The technique allowed her to understand her body, be aware of each aspect, and every movement that she made. Within the first quarter, her vocal abilities improved dramatically. Singing felt easier and she did not have the same amount of trouble. The issue occasionally resurfaces when she is nervous or stressed, leading her to continue her Alexander training. After researching the topic, she worked with the vocal professor and found she was "smiling with her vocal cords" while singing, which caused the vocal cords to be pulled apart. Due to taking the Alexander Technique lessons, she is able to be aware of her body and incorporate the feeling of her vocal cords being closer together, which cured the issue she had for many years. Searching for research on the topic, she hoped to learn of the experiences of other vocalists exposed to this field. Finding a lack of evidence in the literature, she embarked on this project in order to make a

small contribution, with the hope that many other researchers would pursue further investigations in this field.

The Origins of the Alexander Technique

In his 1932 publication, Frederick Matthias Alexander describes originating the Alexander Technique as a way of thinking and using the body in response to debilitating issues he was facing as a theatrical performer. He explains his voice becoming raspy from performing monologues and wanting to know if he was habitually doing something physically that was negatively impacting his performance abilities. According to Barlow (1990), a visit to a doctor's office revealed that Alexander was physically healthy. However, his symptoms of a hoarse voice after each theatrical performance continued, and the doctor reaffirmed the previous conclusion. Alexander asked if the hoarseness might possibly originate from a physical habit while performing, but the physician replied that he did not know. Frustrated at the lack of medical assistance, Alexander decided to conduct his own investigation. Weiss (2005) explains that Alexander manipulated his body in the mirror in various ways to observe if any movement would cause variable impact on his vocal structure. In addition to researching his own situation, Barlow (1990) further reports that Alexander would view the physical habits of fellow actors, to see how they would use their bodies to perform. Eventually, by watching others and manipulating his own body, he came to the conclusion that incremental movements do have the ability to inhibit the sound quality of the voice and everyday activities.

Barlow explains how Alexander gradually developed his technique, based on the realization that physical habits are involved in movements of the body. Although Alexander did not have medical knowledge, he discovered that human bodies have the ability to create an ease of motion. Alexander taught the technique to many who continued to share his knowledge and was soon followed by others who learned to teach his approach and apply it to vocal production.

The Essential Elements of the Alexander Technique

The Alexander Technique instructs students in allowing their bodies to move with ease, gradually introducing new habits into the use of the body. For instance, "the Alexander Principle is a hypothesis: it is not an established, absolute truth, but a new way of looking at things, a new way of organizing oneself" (Barlow, 1990, p. 3). Although the Alexander Technique involves manipulating body movement, it also involves psychological processes that are intended to result in changing the use of the body. Body-mapping is a term that is used within the Alexander Technique to define each individual's ideas about the size, structure, and function of the body (Allen, 2009, p. 2). It is a concept that was developed by Dr. William Conable, a student of Marjorie Barstow, who was in the first graduating class of Frederick Matthias Alexander (Conable, personal communication, October 2, 2011). He explains literally mapping our bodies with our brains: "that is, we conceive neutrally what we're like (structure), what we do (function), and how big we are (size)" (Conable, 2000, p. 13).

Application of the Alexander Technique in Vocal Production

Vocal production is influenced by the Alexander Technique through a process that has the individual consider how the body functions (Hudson, 2002). The body works as a whole in order for the singer to perform at full potential. All the parts of the body work together, for instance, "the movement of the ribs in the back and downward release of the pelvis as the spine moves during respiration are both factors that AT teachers such as Conable believe traditional breathing instruction does not address" (Hudson, 2002, p. 108-109). Each individual has a different experience when sensing the body kinesthetically. Applying this technique involves organizing "complex messages from muscles, ligaments, and tendons, providing the brain with information regarding the balance of the body, its position in space, and the qualities of our movements, as well as our reflexes" (Hudson, 2002, p. 1). The process of "lengthening the spine on exhalation sets up the framework for the inward swing of the ribs" (Hudson, 2002, p. 108). This technique assists the singer in feeling an ease of motion and in using the body in a natural way. Allen (2009) describes how "singers who learn how to perceive their bodies kinesthetically will clearly discern movement, size, position, and quality, which is vital for beautiful, communicative, and healthy singing" (p. 2). An individual's body map might be different from the reality of the construction of the body and might therefore inhibit the person from moving easily (Allen, 2009, p. 2). Training in the Alexander Technique aims to help individuals in improving their ability to be "kinesthetically

sensitive, so [they can] perceive [their] body in motion" (Allen, 2009, p. 6). Conable (2000) explains that, "when singers return to the richness of their own sensations, and when they apprehend and honor their actual structures, they find balance, freedom and, with practice, mastery" (p. 14). Furthermore, since singers use their bodies as the instrument, there is a necessity in understanding how every part of the body moves and feels in order to sing with their full potential. It is suggested that having the correct "psychological" body map can enhance musicians' abilities to apply the Alexander Technique and impact their vocal production.

Problem Statement

Despite quality vocal instruction, there are numerous vocalists who continue to face vocal problems that prevent them from reaching their full singing potential. Voice students are characteristically taught how they should stand, maintain body posture, and produce vocal sound. However, they also acquire physical habits from everyday activities that may cause physical. The search for solutions to these problems leads to questions regarding the process and outcomes of applying the Alexander Technique in vocal production, a technique that claims to assist individuals in achieving awareness of their bodies, identifying inappropriate physical habits and experiencing natural ease of movement. The lack of sufficient evidence in the research literature regarding how vocal students incorporate this process into their singing and regarding outcomes results in a lack of knowledge being available to the vocal music education profession.

Need for the Study

The rationale for this study is the need for information on the process and outcomes of the Alexander Technique when applied in vocal performance. While there is much literature describing the Alexander Technique from historical, theoretical and pedagogical perspectives, comparatively little research provides detailed documentation on the perceptions of vocalists in their experience of applying Alexander Technique in their vocal technique. Research investigations are needed to inform the music education profession on possible procedures, benefits or challenges of applying the Alexander Technique in vocal production.

Purpose Statement

The purpose of this case study is to investigate perceptions of teachers and students on process and outcomes in applying the Alexander Technique in vocal production.

Inclusion Criteria

Criteria for inclusion in the study included being a student or teacher with experience with the Alexander Technique in vocal production at an identified higher education institution in close proximity to the researcher's residence. Participants were further required to be 18 years or older, due to the advanced level of questioning involved in the investigation. In order to include student participants with varied exposure to the Alexander Technique, the researcher aimed to include at least one senior student with several years of training by the specified master teacher

in the Alexander Technique; at least one junior student with about one year of such training; and at least one freshman with one quarter of such training.

Research Questions

The essential research question for this study was: "What are perceptions of a master Alexander Technique teacher, a vocal professor and students regarding the process and outcomes of the Alexander Technique in vocal production?"

Philosophical and Interpretive Assumptions

This study was conducted with an ontological philosophical assumption. As such, the researcher held the understanding that each of the participants has varied realities and that no one participant holds a single, true answer to the research questions (Creswell, 2013). The meanings and perceptions of the participants are subjective realities. In the constructivist view, meanings are "constructed" rather than discovered "by human beings as they engage with the world they are interpreting" (Crotty, 1998, p. 43). Therefore, the report includes direct quotes from participants and seeks to offer evidence of these different perspectives and meanings. The researcher also aimed to identify trends and diversity in perceptions of the participants and any links between the reports of the various types of participants.

Statement of Bias

The researcher has acquired first-hand experience of the Alexander

Technique through participation in six ten-week courses of two hours per week

taught by a master teacher. For a period of two years, she has also taken graduate

voice lessons from a vocal professor who is well experienced in the Alexander Technique. The researcher has perceived, through studying and practicing the technique, impact on the quality of her voice. Being involved in the field has given her sufficient knowledge to be able to conduct and report on this investigation with an appropriate level of understanding. While she admittedly has her own perceptions on the topic, the researcher nevertheless made every effort to set those perceptions aside, and to "rely as much as possible on the participants' views of the situation" (Creswell, 2014, p.8). She was careful to avoid any possible influence on the participants in their thinking, and to report accurately on the data collected.

Research Approach and Design

The theoretical framework or approach for this qualitative research investigation is that of a case study, in which perceptions on the process and outcomes of the Alexander Technique in vocal production is examined within one institution of higher education in the United States of America. This methodology is in line with the definition of qualitative research offered by Denzin and Lincoln (2011) as being a "situated activity that locates the observer in the world" (p. 3). The study addresses the meanings that individual participants ascribe to their experience of the Alexander Technique and its outcomes in vocal production. The strategy in determining the sample population was to include a master teacher who gives instruction in the technique, a vocal professor who applies the technique in his vocal teaching, and several vocal students who have taken course(s) in the technique. As

explained by Creswell (2013), data collection involved multiple sources, in order to acquire sufficient evidence to provide illumination on the topic. Thus, the study involved a strategy that included analysis of interviews, observations, field notes and documents. There was an emerging design in which an initial plan was prescribed, but without the need for this to be followed tightly. The key instrument was an interview script consisting of open-ended questions designed to elicit detailed information (Patton, 2002). As anticipated, the interview process led to additional questions, mainly to ensure clarity in the responses or to pursue in further depth any points addressed by the participants. It was also anticipated that there might be gathering of additional documentation that might have become evident during the investigation; however, nothing further came to the researcher's attention. Data were analyzed for trends and diversity between the perceptions of the different participants. Furthermore, analysis was conducted to determine any links or disparities between the perceptions articulated in interviews, in practice journals and in the researcher's field notes.

Limitations

The limitations of this study are that the results are confined to the study population, which is a small group of participants attending a higher education institution in the United States of America, all of whom are directly involved with the field of Alexander Technique as it relates to vocal production. The results are not generalizable. Further limitations are imposed by the data collected, which cannot

reflect all possible realities of the topic being investigated. The investigation is also limited by the skills of the participants in accurately identifying and expressing their perceptions. Furthermore, the results are limited by the assumption that participants reported their perceptions honestly. The researcher aimed to put the participants at ease by discussing the value and validity of their perceptions and the fact that there were no "right" answers. Her intention was to earn their trust in order to improve the potential for honesty in the responses and to minimize any bias in the results. She endeavored to give them sufficient time and encouragement to reflect carefully on the questions being asked. The researcher also aimed not to lead the participants towards any specific answers, but to establish a level of security where the participants would feel the freedom to answer honestly. Furthermore, no reward or penalty was associated with participation or nonparticipation, with the aim of minimizing any sense of obligation or need for allegiance to any viewpoint. Nevertheless, the study is limited to the information that was shared with the researcher.

Definitions

"Belting" is a word used to describe a style of singing that involves using the chest and middle voice in a loud and forceful manner.

"Body mapping" is the perception of an individual of how the body is formed, functions, and looks.

"Master teacher" is defined as an individual who has advanced training and experience in both practice and teaching in the Alexander Technique.

Chapter 2: Review of Related Literature

This chapter provides a review of literature pertaining to the historical and theoretical development of the Alexander Technique and aims to highlight its essential elements as they pertain to vocal production in singing. Furthermore, it provides a case for the need for research in this field of study.

Overview

Achieving quality vocal production is promoted through the study and application of the Alexander Technique (Alexander, 1937, p. 21). Frederic Matthias Alexander (1932) describes developing the technique in response to his own vocal problems in the theatrical setting. He explains that he began studying his habitual movements after noticing that his voice became hoarse after each performance. By releasing physical tension through using the body in natural ways, he improved his speaking and vocal production. The technique has since been applied to various other fields of activity, such as music vocal performance and sports (Alexander, 1937, p. 25). The technique is believed to help individuals become aware of themselves, lengthen their muscles, and move with freedom (Conable, 2000, p. 22). When the Alexander Technique is applied in vocal production, the quality of sound is enhanced because the vocal cords have an increased ease of motion. Furthermore, Alexander's method of using the body with freedom of movement enhances the singer's ability to produce quality sound, breath support, and an awareness of the body. Despite the widespread awareness of claims pertaining to the value of the Alexander Technique

in vocal production, not enough research exists that provides evidence of these outcomes.

The Historical Roots of the Alexander Technique

The Alexander Technique is described by Williamon (2004) as "a method of kinesthetic re-education developed by F.M. Alexander, who was born in Tasmania in 1869, emigrated to England and died in London in 1955" (p. 179). Alexander (1932) reports being "sufficiently successful to think of taking up Shakespearean reciting as a career," and explains that he "worked long and hard at the study of every branch of dramatic expression" (p. 6). Alexander describes continuing his performance career in a travelling Shakespearean group, reciting monologues, when he began to notice his voice becoming hoarse after performances. He wanted to know what was causing the weakness in his vocal cords and found that his actions initiated the irritation. At first, he thought the physical structure of his vocal organ was damaged beyond repair, but his doctor found nothing physically wrong with him. In a recollection of these events, Alexander said, "all went well for some years, when I began to have trouble with my throat and vocal cords, and not long after I was told by my friends that when I was reciting my breathing was audible, and that they could hear me (as they put it) "gasping" and "sucking in air" through my mouth" (Alexander, 1932, p. 6). This devastated him because a professional performer would not allow air to seep through the tone or their breathing be heard. He first went to visit the doctor to find out if the cause was a physical problem with his vocal cords or throat. However, the

initial diagnosis was "irritation" and Alexander was given medication, along with a suggestion to speak less than he would normally. Alexander explained: "the treatment I was receiving became less and less effective as time went on, and the trouble gradually increased until, after a few years, I found to my dismay that I had developed a condition of hoarseness which from time to time culminated in a complete loss of voice" (Alexander, 1932, p. 7). After the treatment prescribed to Alexander was unsuccessful, he reported visiting the doctor yet again to obtain medicine to prevent the symptom from occurring in his recital, only to receive instructions to speak very little before the performance (Alexander, 1932, pp. 7-8). However, despite having followed the doctor's advice, Alexander lost his voice completely during the performance and became perplexed due to the reoccurring symptoms. During his recital, he experienced further lack of vocal abilities, which caused Alexander to see the doctor a third time, in hope there would be a different remedy. When the doctor informed Alexander there was no medical solution for his issue, he asked, "is it fair, then...to conclude that it was something I was doing that evening in using my voice that was the cause of the trouble?" (Alexander, 1932, p. 8). The doctor replied that this was a possibility, but that he did not know what Alexander was doing to cause his voice to react this way. Alexander recalls: "I had learned by experience that reciting brought about conditions of hoarseness, and that this hoarseness tended to disappear, as long as I confined the use of my voice to ordinary speaking, and at the same time had medical treatment for my throat and

vocal organs" (Alexander, 1932, p. 8). Since Alexander had difficulty when reciting rather than ordinary speaking, he concluded that the cause must have been in the habitual way he was reciting. This discovery was intriguing to Alexander and he began experimenting to detect the physical actions he was initiating that caused his hoarseness (Alexander, 1932).

As a scientific hypothesis, Alexander thought that, if he viewed his actions of speaking and reciting in a mirror, he would be able to identify the obscure habits he possessed, and to "distinguish the difference, if any, between them" (Alexander, 1932, p. 9). He reports that "it seemed better to begin by watching myself during the simpler act of ordinary speaking, in order to have something to go by when I came to watch myself during the more exacting act of reciting" (Alexander, 1932, p. 9). He did not see anything that was unnatural during speaking ordinarily. However, when he watched his reciting, he began to notice several things occurring that he had not noticed while speaking. Alexander saw habits that he had developed over the course of time while he was perfecting his art and he "saw that as soon as [he] started to recite, [he] tended to pull back the head, depress the larynx and suck in breath through the mouth in such a way as to produce a gasping sound (Alexander, 1932, p. 9). He attempted to speak again, noticing the unnatural tendencies to a lesser degree than when he recited the monologues, and came to the conclusion that "if pulling back [his] head, depressing [his] larynx and sucking in breath did indeed bring about a strain on [his] voice, it must constitute a misuse of the parts concerned"

(Alexander, 1932, pp. 9- 10). In addition to his past discoveries, he noticed that "wrong use of his head and neck synchronized with wrong use of his legs, feet, and toes and undue tension throughout his body" (Lewis, 1980, p. 34). He discovered that his hypothesis was correct, in that his habitual movements were causing his voice to respond in the way he had not anticipated for performances.

Since Alexander's discovery that specific movements causes strain on the voice, he was able to perfect his thought process and change the old habits to natural ones. After experimenting for a certain period of time, he believed that he had "found the root of the trouble," arguing that if hoarseness resulted from the way misuse of his body, he would not progress unless he could "prevent or change this" (Alexander, 1932, p. 10). With this new epiphany, Alexander "went on experimenting in the hope of finding some use of the head and neck which was not associated with a depressing of the larynx" (Alexander, 1932, p. 13). By continuing to view himself moving in the mirror, he "came to notice that any use of [his] head and neck which was associated with a depressing of the larynx was also associated with a tendency to lift the chest and shorten the stature" (Alexander, 1932, p. 13). The next question was how he would defy these tendencies in order to be released from the misuse of his current habits.

In the completion of figuring out the cause to the hoarseness of the voice,

Alexander was able to diagnose the issue without medical training. He found that:

The functioning of the organs of speech was influenced by [his] manner of using the whole torso, and that the pulling of the head back and down was

not, as [he] presumed, merely a misuse of the specific parts concerned, but one that was inseparably bound up with a misuse of other mechanisms which involved the act of shortening the stature. (Alexander, 1932, p. 13)

In the attempt to prevent the shortening, to lengthen and speak at the same time, he found that he "did not put [his] head forward and up as [he] intended, but actually put it back" (Alexander, 1932, p. 15). Alexander further discovered that his efforts were not successful because he was not using his body as a whole entity. He realized that a previous concept of "taking hold of the floor" with his feet was leading to problems (Alexander, 1932). It was in the challenge of trying to initiate change in his habitual response, that Alexander discovered this new application, which later became known as the "Alexander Technique."

Alexander further developed the technique through introducing the concept of changing his habits and replacing them with new ones. At first he needed to avoid sudden, purposeful action in order to identify his habits and he concluded:

After many disappointing experiments of this kind I decided to give up any attempt for the present to "do" anything to gain my end, and I came to see at last that if I was ever to be able to change my habitual use and dominate my instinctive direction, it would be necessary for me to make the experience of receiving the stimulus to speak and of refusing to do anything immediately in response." (Alexander, 1932, p. 27)

Before instinctively responding, Alexander would have to think about the change he wanted to create within himself in order to develop a new habit. He explains: "sensory appreciation (feeling) of the use of my mechanisms was so untrustworthy that it led me to react by means of a use of myself which felt right, but was, in fact, too often wrong for my purpose" (Alexander, 1932, p. 39). Alexander wanted to

choose an action that would feel comfortable, easy, and natural rather than his current habit that was destroying his ability to perform. When he moved, he would notice his every movement in order to discover which actions were necessary and any that were not. He wanted to change from the effort that was dispensable and replace this with a new habit that would allow an ease of movement.

The Alexander Technique was soon brought to a new level of cognitive perception by defining the processes involved in the control of the human body. After continuous experimental failures, Alexander states: "I was able to bring about the improvement in the sensory appreciation of the use of my mechanisms which was associated with the improvement in functioning throughout my organism" (Alexander, 1932, pp. 39-40). He comments that, when people are aware of their bodily functions, they will be able to feel the individual movements of each body part and have the ability to allow the body to use its natural motion. Alexander further explains:

This meant that the stimulus to use my voice no longer brought into play the old reflex activity which included the pulling of my head back and down, leading to a shortening of my stature, and which constituted my harmful habitual reaction to that stimulus, but instead, a new reflex activity which included putting my head forward and up to lengthen the stature and which, by its results, proved to be a satisfactory reaction to that stimulus. (Alexander, 1932, p. 10)

In the effort of developing a new habit, Alexander noticed that his "habitual reflex activity was "conditioned" as a natural consequence of the procedure adopted, since the new reflex activity to which it was changed in the process was associated with

new and improved general conditions of use and functioning" (Alexander, 1932, p. 40). In order to comprehend and incorporate this technique, as Alexander discovered, performers must be aware of themselves before incorporating new habits that allow their bodies to move with freedom.

The Essence of the Alexander Technique

The Alexander Technique instructs students on the art of using their bodies with ease of movement. In understanding how to implement the technique, students are taught that "the human body is not designed to remain in one position for hours at a time;" and "prolonged muscle tension causes fiber shortening and restriction of circulation, which results in inadequate dispersal of muscles metabolites and chronic pain" (Williamon, 2004, p. 49). Rather, the human body is in constant motion even when sitting because the body is a living organism. Further, Alexander (1932) considered that the key to efficient control of bodily movement was the relation of the head to the neck and back, the "primary control" as he called it, a position of mechanical advantage" (Alexander, 1932, p. 179). By allowing the head to lengthen, the body follows and will resume the initial bodily movement.

The technique is taught by an instructor who "usually teaches with their hands by directing or guiding movements and awareness of the body" (Alexander, 1932, p. 180). Although Alexander teachers have many different approaches, "training in the Alexander Technique is carried out by a qualified Alexander teacher who uses a hands-on style to guide the student to greater awareness of habitual

misuse of the body, voice, and mind" (McLeod, 2010, p. 6). This approach initiates an energetic help that causes the students to release tension from their head to their toes and resulting in the student feeling relaxed, a well-being, and their bodily space (Alexander, 1932, p. 7). By helping the students "lengthen," the Alexander teacher teaches them how not to "shorten" muscles in habits that misuse the body (Alexander, 1932, p. 7). Encouraging the students to experience freedom of the neck and head, the teacher directs them to walk around the room to become aware of what is occurring in themselves and to experience balance (Alexander, 1932, p. 7). The Alexander teacher continues by helping the students experience movement that creates a "feeling of lightness, balance, length, and expansion" (Alexander, 1932, p. 7).

The focus in an Alexander Technique class is daily movements, for instance, getting in and out of a chair, and walking (Williamon, 2004, p. 180). Alexander Technique instructs individuals how to move outside of their learned habits with help from the teacher, for example, "Alexander training requires one not to learn a new set of skills, imposed on the habits of use already learned, but to examine one's habitual use of self in common movements" (Lewis, 1980, p. 2). Alexander instructors guide movements "in which habitual postural adjustments of the head and neck are inhibited, require less force, show less muscle activity, and are quicker and smoother than habitual movements" (Williamon, 2004, p. 183). In general, "people develop habitual patterns of muscles, perhaps owing to the failure of instinctive

control of the body to keep pace with civilization in the evolution to upright posture" (Williamon, 2004, p. 179). Humans are born with the ideal movement abilities but lose them as they develop habits from watching and mimicking adults, participating in activities, and attempting to sit still. Williamon (2004) describes how, in an Alexander lesson, the students were "guided to sit-stand movements showed a decrease in head movements, ground reaction forces, and electrographic activity in the trapezius, sternomastoid, and erector spinae muscles (located in the shoulders, neck, and back respectively)" (Williamon, 2004, p. 183). In order to instill the ability to incorporate the technique in movement there is:

an important element [which] is maintaining a state of openness with regard to the eventual act to be performed: thus, at the critical moment, a decision may be made to inhibit the intended action, to perform an alternative action, or to continue with the intended one. (Williamon, 2004, p. 179)

Alexander Technique students need to have an awareness of themselves and to identify the various aspects of their bodies, in order to understand the types of movements each part makes.

Incorporating the Alexander Technique in Vocal Production

The Alexander Technique can be integrated into the normal habits of human beings by understanding certain terms and the cognitive processes that are required. For instance, Alexander explains that "the so-called "mental" and "physical" are not separate entities" (Alexander, 1932, p. 5). When incorporating the technique, many individuals attempt to separate the cognitive process from the habitual physical responses, experiencing unsuccessful results, because the body works as a wholistic

entity. Alexander explains this method in the term psycho-physical which "is used both here and throughout [his] works to indicate the impossibility of separating 'physical' and 'mental' operations in our conception of the working of the human organism" (Alexander, 1932, p. 5). The mental and physical aspects of the human body cannot be disjointed from one another because each part is unable to function without the other. The human body has many neurons that send messages to the brain when a certain part is in pain or is moving. Also, the mental capacity of the human body begins the bodily movement by sending messages to several physical parts. If either the mental or physical facet of the body is without the other, the body would not have the ability to move, feel pain, be aware of pleasure, etc. Alexander continues to explain that "it [is] essential that man should acquire a new way of directing and controlling the mechanisms of the psycho-physical organism as a whole" in order to develop the ease of movement that the technique is able to provide (Alexander, 1932, p. 9). In order to include the Alexander Technique into regular daily activities, and other activities, the person must use cognitive processes as well as awareness of the body to change their habits.

Humans create habits throughout their lives, and have continuous opportunities to develop new habits. Alexander explains:

With this knowledge the human creature would have had some chance of meeting satisfactorily the increasing demands of his ever-changing environment, and of commanding a continuous growth and development of the organism itself, that marvelous psycho-physical instrument which holds itself the potentialities for the satisfying of such demands. (Alexander, 1932, p. 9)

Not only does the implication of the cognitive process with the use of physical attributes encourage progress in physical function, but it also allows the person to develop a full awareness of the self and their surroundings. However, it is proven through the experiments Alexander conducted, that "understanding intellectually how something works can cause us to interfere with natural processes" (Harrison, 2006, p. 32). In accordance with this view, cognitive processes can sometimes hinder the development of self-awareness. Alexander clarifies that, as "so-called mental processes are mainly the result of sensory experiences in psycho-physical action and reaction, it will be obvious that in our conception of how to employ the different parts of the mechanism in the acts of everyday life we are influenced chiefly by sensory processes (feeling)" (Alexander, 1938, pp. 32-33). Due to the sensory neurons within the human body, the messages that are sent from the parts of the body to the brain can communicate how the aspects feel – whether they are in pain, feel pleasure, or are neutral. The Alexander Technique is implemented in everyday life with the cognitive processes of being aware of the body, the body movements, and how each part feels.

The concept of misuse denotes using the body in any way that does not work well. Misuse of the bodily functions may become evident due "to the extent that wrong tensions exist, therefore, a blockage of self-awareness and self-perception also exists" (Reid, 1984, p. 27). When there is a misapplication of the technique, the person is not being sufficiently attentive to the feelings of each aspect of the body,

which might conclude in harming oneself through undesirable habits that develop over time. Students typically begin at this stage and the Alexander teacher helps them to experience new ways of moving, which makes "it...evident, therefore, that freedom from all wrong control must come before control of freedom can be experienced" (Reid, 1984, p. 25). When students allow their bodies to move in natural ways, as bodies were intended to move, they begin the cognitive process of changing their destructive habits to new, constructive ones.

As musicians, singers have the potential to misuse their bodies, even though they characteristically have much perception of how their bodies function. Since the human body is the singer's instrument, "a majority of singers mistakenly believe themselves to have good control because through practice, they have learned to confine their voices within some form of discipline" (Reid, 1984, p. 25). Breath support is an aspect of fine, constant effort in singers. For instance, the body provides support during singing, which can potentially cause an excessive amount of force and damage the fragile vocal cords (Harrison, 2006, p. 43). Vocal cords, in actuality, are extremely small and the slightest amount of force could cause a disturbance of sound including unwanted tension or stress. While singers practice their art, "it is realized that the amount of breath passing through the tiny pair of cords is so minute that it barely seems necessary at all, and that singing "with breath" or "breath support" becomes a redundant pursuit" (Harrison, 2006, p. 45). The body naturally inhales and exhales without needing any help from the perspective of the

singer, a reality that is evident in how long infants are able to scream without hurting their vocal cords and with a seemingly endless air supply. However, singers tend to develop habits that manipulate the breath, unless they are able to recognize the experience of allowing their bodies to naturally allow the airflow to move within themselves.

The adaptation of the human voice in the application of singing was an early evolutionary component of human development (Harrison, 2006, p. 5). A child does not need instruction in order to laugh, cry or sing, "since all these activities...come naturally to them" (Harrison, 2006, p. 35). For example, it has been suggested that when infants cry at night, their voices do not become sore because they are fully aware of their bodies and have not developed adverse habits (Alexander Technique BodyandMind, 2013). Singers need to identify and have awareness of the natural aspects of body movement, for instance, "how we use our bodies is reflected in the voice, therefore, the awareness of how we use our bodies is of great importance whilst speaking and/or singing for an audience, and getting to know your full instrument will give you more choices in the way you use your body and your voice" (Alexander Technique BodyandMind, 2013). Understanding the use of the human body is necessary for vocalists because their bodies are their instruments.

It is suggested that becoming aware of the movement of the body will allow better breath support and make available the ability to sustain notes for a longer period of time. When the chest cavity is allowed to move, the body automatically

produces what the body needs. For example, "inhaling requires no conscious effort provided the breathing out system is sufficiently well innervated" (Harrison, 2006, p. 39). The human body involuntarily inhales and exhales as a natural response that is necessary for the human body to continue living. When an individual holds the breath for a long period of time, the body will instinctively allow air in the chest cavity. People may assume "that there's a special way to breathe for singing, which entails increasing the capacity of our lungs," however, the breathing system is the same when one is not singing (Harrison, 2006, p. 39). Those who believe the myth that singers breathe differently have an issue of "muscling in' [which] is a symptom of misunderstanding the purpose of [the body's] muscular structure, which among other things is there to make vocalizing easy" (Harrison, 2006, p. 42). Beginning singers have a tendency to tense their muscles in order to produce sound or breathe, but this effort is unnecessarily due to the natural ability of the body. This type of misuse causes a "conflict between the body and the throat, [causing] a voice...to seize up or break down" (Harrison, 2006, p. 42). Since singing is a natural process, the "idea of 'singing on the breath' (as distinct from with the breath) possibly arose from the ease with which a voice in the 'minimal breath' condition flows, with its accompanying lack of pressure and absence of 'fixing tension'" (Harrison, 2006, p. 45). The Alexander Technique encourages vocalists to use these natural movements of the body. It is suggested that "using the Alexander Technique in combination with voice work is a golden tool for anyone who wishes to discover the full potential and

finest nuances of the voice without ever hurting in the process of doing it"

(Alexander Technique BodyandMind, 2013). For instance, "this method provides the awareness of the whole body giving the singer/speaker the freedom to fully express his thoughts and emotions without having to worry about breath or how high or how low is the note that comes ahead" (Alexander Technique BodyandMind, 2013).

Williamon (2004) reported: "movements in accordance with the technique are characterized by economy of effort, a subjective sense of lightness, and a balanced and appropriate distribution of tension (not the absence of tension, but no more than is necessary)" (p.179). Lewis (1980) claimed that the technique provides a way of "development of intellectual and kinesthetic self-awareness [which] is central to Alexander training, and is also essential to the fine speaker, or actor, dancer or singer" (p. 2). Singers must have the capacity to indulge in themselves and comprehend the processes of their own bodies in order to sing or incorporate the Alexander Technique into their daily practice sessions. When time has been used well in practicing the technique, an "improved functioning usually does result in observable phenomena such as more resonant speech and freer singing" (Lewis, 1980, p. 2). The Alexander Technique has the ability to distinguish the tension that each singer contributes to vocal production, aiming to replace this with a natural tendency of creating sound.

Alexander classes enhance students' abilities to become aware of their movements, particularly in the case of a musician. The teacher will help students

become "aware of maladaptive, habitual reactions that are often associated with underlying patterns of tension and anxiety (e.g. singers skewing their head to one side on high notes or string players arching their back) and encourage ease and freedom of movement" (Williamon, 2004, p. 181). The singers' ability to produce a quality sound is increased due to the decrease of muscular tension within themselves. By allowing the muscles to move instinctively, the produced sound is more natural and will feel easy to the vocalist. For example, Williamon (2004) describes the study by Jones (1972) in which he "made recordings of a singer when in the habitual mode and when the balance of the head was altered by the experimenter in accordance with the Alexander principle" (p. 187). As a result, "the singer reported that she sang more easily with greater resonance and better breath control under the experimental conditions" (Williamon, 2004, p. 187). Further research involved a spectrogram that "confirmed increased richness of overtones and the virtual disappearance of breathing sounds during the experimental session" (Williamon, 2004, p. 187).

While the above review offers an overview of information available on the applications of the Alexander Technique in vocal production, the literature lacks rigorous reports on qualitative and quantitative data collected on the experiences of vocalists in this field. Thus, there is a lack of evidence that is needed to confidently provide implications for the vocal education profession.

Summary

This chapter offered a review of literature that covered a background on the historical origins of the Alexander technique. It also provided detail on the critical elements of the technique. It finally reviewed literature on the application of this technique to vocal production and ended with a statement on the need for research that clarifies the experiences of students in applying the technique to vocal production.

Chapter 3: Methodology

This chapter provides a description of the methodology used in this research investigation, including details on the sample, study design, the population, recruitment, instrument, procedures, and data analysis.

Sample

Sampling in this case study took place at a site level, process level and a participant level. The investigation involved a sample of convenience, the site being a music department at an American university offering instruction in vocal production and in the Alexander Technique. The university was selected because of its close geographical proximity to the researcher's place of residence. At a process level, sampling included teachers and students involved in some way with the Alexander Technique. At a participant level, the sample included a master teacher of the Alexander Technique, one vocal professor who applies the Alexander Technique in his teaching, and three vocal students, each of whom had taken one or more courses offered by the master teacher. Since the researcher wanted students with varying levels of experience, it was predetermined that one student needed to be of senior standing with several years of training by the specified master teacher in the Alexander Technique; one needed to be of junior standing with about one year of such training; and one needed to be a freshman with one quarter of such training

Recruitment

Once IRB approval was obtained, the researcher formally approached the master Alexander Technique teacher, the vocal professor and the three students identified as matching the inclusion criteria, informing them of the study aims and procedure and inviting them to participate. Participants were required to sign consent forms prior to participation.

Study Participants

The three student participants (two females and one male) were enrolled in full-time undergraduate music degree programs at the university where the study was being conducted. Each had taken at least one 10-week course in the Alexander Technique by the master teacher at this university. For anonymity purposes, the students' names were changed in this document to Jake, Miriam, and Stephanie. They were ages 19 to 23 years. The master teacher recruited to this study is a retired professor, internationally-known as a teacher of the Alexander Technique. He was taught by Marjorie Barstow who had studied with Alexander, the originator of this technique.

This master teacher offers weekly two-hour classes each quarter at this institution, under the auspices of a student interest club. Students pay club fees that provide the master teacher with financial compensation. The vocal professor recruited to the study is a senior professor who had previously acquired extensive training in the Alexander Technique and is advancing towards becoming an

internationally certified teacher of the technique. He applies the Alexander Technique in his vocal teaching.

Study Design

This study involved a qualitative research design, the approach being that of a case study. Data was collected in three different ways. The first was through interviews with the master teacher, the vocal professor, and three students. The interviews were conducted face-to-face, audio recorded and later transcribed. The anonymity of the participants was protected by deleting names from the data and coding the data. As the identity of the master teacher might reasonably be deduced, he gave permission for his identity to be evident. The second form of data collection consisted of field notes written by the researcher during field observations of students in individual voice lessons with the vocal instructor. Her field notes documented her observations of teaching approaches, techniques applied, and the students' vocal production. The third form of data collection involved documents, being student practice journals.

Instrument

The key instrument for the interview process involved a script used for interviewing all study participants, with slight variances as appropriate for the master teacher, the vocal professor, or the students. Flexibility in adding further questions was allowed as the conversation developed with each participant. The questions were

open-ended, in order to solicit perspectives that would provide insight, background and viewpoints pertaining to the areas being covered.

Data Collection and Analysis Procedure

The researcher interviewed each of the participants individually in her graduate assistant university office. Interviews took between 20 - 90 minutes each. Coded recordings of the interviews were stored on the researcher's password-protected laptop and, after transcription, were immediately destroyed. Audio recordings were made of the three individual lessons with the vocal professor in case the researcher needed to refer back to them at a later stage. All data was coded and stored in digital format on the same password protected laptop. The researcher conducted field observations, taking field notes while observing the vocal teacher instructing each of the three students once, in approximately 50-minute individual lessons. The researcher collected journals from the students regarding their practice sessions from the previous two weeks.

The researcher conducted analysis of the data in order to determine trends and variances in the perceptions of the participants on the process and outcomes of the Alexander technique in vocal production. Furthermore, analysis was conducted to determine any links or disparities between the perceptions of the participants expressed in the interviews, the practice journals and the researcher's field notes.

Summary

This qualitative study involved a case study in which a master teacher, a vocal professor and three students in a higher education institution in the United States of America were interviewed regarding their perceptions on the impact of the Alexander Technique on vocal production. Further evidence was collected through conducting field observations and collecting documentation such as student practice journals. All data was collected anonymously and interviews were transcribed and analyzed for recurring trends, range of diversity and links between the perceptions of the participants. The research instrument (interview script) was designed to answer the research question. Results are presented in Chapter Four and discussed in Chapter Five.

Chapter 4: Results

This chapter provides the results of data analysis. The perceptions are reported under the headings of the three types of population groups – the students, the master teacher, and the vocal professor. Following this, analysis of the results pertains to finding trends and diversity within the perceptions of the three types of participants, and highlighting any links between the perceptions of the participants and what is reflected in the practice journals and the researcher's field notes.

Research Questions

The research question for this study was: "What are perceptions regarding the process and outcomes of applying the Alexander Technique in vocal production?"

Master Teacher's Perceptions of Expectations for Student Experience

In his interview, the master teacher explained:

Any time you're talking about any high level physical skills, you're talking about...somebody who spent a lot of time developing the detailed technical knowledge about what it is that they are doing so they can...habituate it and forget about it while they pitch to the next batter up or sing their aria or whatever it is that they do.

He described the technique as helping students "think clearly about the details of what they are doing" and "about how those details fit into their new way they use themselves in general." He continued to explain that, by knowing the specifics of the body, and moving naturally, new habits will form that eventually will not need conscious attention. The master teacher reported that he instructs the students to

allow the body to move naturally. He further suggests to the students that humans often unwittingly create habits that might inhibit freedom of movement. He described providing tools for the students to consciously feel each part and function of the body. The master teacher gave the example that: "in general if people are using themselves freely...and not constrained in their movements, their vocal production is [going to become] clearer and better just as their piano playing might get clearer and better." He further explained: "the Alexander Technique is a technique for improving freedom and ease of movement in any context." He described his approach to teaching students the Alexander Technique: "I...watch the way they move and use themselves as a whole." The master teacher further recalled that he is able to see "issues in their movement and when those get cleared up... that leaves them with much greater resource to sing better, play better, play lacrosse better, or go up and down stairs more easily." The master teacher says that, no matter the activity, with the implementation of the Alexander Technique, the student will learn to know their bodies and how they work, leading to a freedom of movement.

He explained that the Alexander Technique's main goal is to teach an individual how to move the body with freedom. The master teacher explained how he identifies the progress of each one of his student's abilities to incorporate the Alexander Technique into vocal technique. He guides movement, using his hands to encourage the student to allow natural muscular motion. The master teacher

explained that he helps the students experience what it is like to sing while incorporating the Alexander Technique.

The master teacher explained that his awareness of students' breathing has enabled him to guide them to release muscular tension. He continued to explain that many students who take the Alexander Technique are not attentive to the movement of the rib cage. He guides them through the process in order for them to sense tension and be able to correct this independently. The master teacher helps students create more space for the lungs to expand, allowing room for a larger flow of air.

This master teacher of the Alexander Technique has worked with vocalists for over forty years and has been taking voice lessons to improve his resources and understanding. He explained that "in general, if people are using themselves freely and not constrained in their movements," vocal production will improve. He continued to describe that the Alexander Technique teacher does not need to be a singing specialist to teach singers, citing the example of his teacher, Marjorie Barstow, who "was probably as unmusical a person as you will ever meet but she was able to help all kinds of musicians with their playing or with their singing." The master teacher recalled that "everyone could hear the difference and she wasn't working with them from a musical point of view at all, simply she was working with ...their psychophysical expertise, the way they understood their own thinking and how it affected their own movement." The master teacher described his teaching approach as a guide to enhance the students' abilities to sing and to produce quality

sound. He gave an example of what he does by explaining: "I am able to look at them and say, "hmmm, I see you are using your body as a whole," or "your overall coordination, you're interfering with it like this." The master teacher is able to identify parts of the body that the students are not using correctly. For example, he might ask the student: "you're tightening your neck and shortening your stature and if you didn't do that, what would happen?" He explained that the students are able to avoid whatever movement is "interfering with their natural ability to sing." He further described how "everything they've learned in the process of studying singing becomes more available to them." The master teacher guides the students to a level of awareness where they will become able to adjust themselves without his help.

Jake's Perceptions of his Experience

Jake has been studying the Alexander Technique for longer than any of the other students, attending classes four years. In his interview, Jake reported that body-mapping has changed his ideas about himself, his size, and how his body functions. He described his understanding of body-mapping to be a psychological perception of how the individual's body works, looks, and of the body's size. Due to learning more about himself, Jake reported that his idea of his body had changed because while "you can see most of your body...but you can't see the voice and... the things that make the voice... you have to feel it." He also explained this thoughts about how he was able to incorporate the concept of body-mapping into his daily activities by saying, "I think it gave me the idea that there were things going on inside of me that

were complex and mysterious...I had no way of observing except through first person engagement." Jake explained that his perception of his body has changed due to the comprehension of how his body is built to function.

Jake recalled experiencing an ease of motion, and having applied what he learned to every aspect of his life. He explained his perspective on movement: "support is not gained from immobility." Jake continued: "it's been my experience in singing that whether or not it's explicitly taught, we hold parts of ourselves still, in order to feel supported and secure because...singing is scary." He further explained that when he holds his body still, the action inhibits the potential for singing: "movement is more stable than immobility." Jake described his thoughts that encourage movement while he is singing: "one of the things that's joyful about the Alexander Technique is that it's so broad...it can be applied to everything in your life." While practicing the Alexander Technique, Jake continued to identify that "every second of life is an opportunity to practice the Alexander Technique." Jake confided that the Alexander Technique has affected the way he breathes. He continued to explain how the Alexander Technique encourages him to feel the different parts of his body: "I can feel physically my lungs and I can feel physically my spine, and I can feel the diaphragm...so I have some sort of triangulation." Jake further described that awareness of his body has allowed him to feel the physical aspects of his body and the space that is needed to let air in and out of his body. Jake

explained that when he does not use the entirety of his lungs, it is painful to breathe and allow full movement within the rib cage.

Jake mentioned that the use of the Alexander Technique has helped him vocalize with a natural process, without having to manipulate the physical structure. Jake explained how the Alexander Technique helps him in revealing that "the source of the problem is not where more conventional treatments or approaches might think it is." Jake explained that the Alexander Technique has helped him "because it gets at the heart of the problem which is inhabiting your body." Jake explained that he is able to incorporate the tools of the Alexander Technique into his everyday life. He further described his thought process by mentioning, "in our society we value intellect...more than we value physicality and the way our lives our structured, the way our homes are, the way our relationships are." Jake continued to explain that "we tend to disinhabit our bodies and we try to regain habitation in those bodies by going through an intellectual process and often it doesn't work." However, he mentioned that as soon as he trusts the tools that are given to him in the course, he is able to experience the natural processes of his body and incorporate them into his activities, which includes singing. He continued to explain what he does cognitively to change the reaction of the body: "if something hurts, I go to where it hurts physically and I feel inside of it and I stay with the pain and that helps me understand what's actually wrong." He confides that he is able to implement his knowledge of

the technique into his activities by using his cognitive process to think of the certain areas that need to be released.

While enrolled in the Alexander Technique club, Jake recalled experiencing a difference when using his body to sing. He concluded: "the Alexander Technique provides a framework in what I would consider to be technical knowledge about singing." He provided examples of what he has learned in vocal technique: "we shouldn't have our larynxs high, we shouldn't have undue tension in our necks... where do we place the vowels, how much head space do we use versus how much mouth space...how do we get our nasal cavity to resonate, how can we use our sinuses to help us resonate?" By noticing what is occurring in his body, Jake recalls consciously allowing the habit to discontinue by replacing it with a new habit, which he experienced with the master teacher. Jake identifies that "the Alexander Technique has given me a way to assess the degree to which those things are helping me and has given me a foundation under which I can apply my technical knowledge to greater effect." He provided examples of what musicians do psychologically to incorporate the Alexander Technique while singing: "we will go through our check list of things that about which we know...my singing doesn't sound right...but my larynx is down; I have the right vowel position; I'm not using too much mouth space." Jake described his ability to sing when implementing the Alexander Technique: "I have a suspicion that many of the exercises we do in order

to... "strengthen"...our voices but the main purpose for them is...to inhabit ourselves enough physically in order to be able to do what it is that we want to do."

Jake explained that he has developed a sense of himself by continuing to practice and learn more about the Alexander Technique. He describes that being aware of his entire body "feels pleasurable." He further explains, "it feels that I am being used to the fullest extent, which is physically pleasing, but also emotionally pleasing." As a product, Jake stated that he has experienced a quality sound, through attempting to be relaxed and allowing muscular movement. Jake continues by describing his current ability to produce a quality sound: "I am just now starting to be at the point where I can consistently produce something that I would consider to be relatively free, relatively honest, and relatively true to the timbre of my voice and of my personality." He explains that he allows himself to move in ways that are natural instead of manipulating muscular movement. Jake explained perceiving his quality of sound to be produced by what is occurring in his physical structure.

In his practice journal, Jake recorded having "in a strange way, mapped my lungs as part of my lower abdomen...working with the vocal professor helped me to remember my lungs as they truly are and I was able to sing much higher, easier, and fuller." He further recorded that during practice, he assesses himself in his manner of moving, and pays attention to allowing the tension to release. He also stated that he recalls his experience with the master teacher and attempts to reenact the feeling of ease while singing. He reported that his movement is accompanied by the mental

ability to change a habit after experiencing these new modes of operating with the master teacher and vocal professor. Jake further wrote in his journal that he developed an understanding "about the lungs and their true position and full capacity." His journal revealed how he would previously envisage breathing from his diaphragm and inhaling into his stomach. Jake wrote that this discovery had helped him experiment with his ideas of how his body functions and re-learn the precise position of his lungs. Jake explained that the Alexander Technique is useful for being able to breathe while singing and doing other activities.

Jake further recorded in his journal how he incorporates what he has learned about movement from the master teacher's demonstration that "if two opposing muscles are each flexed to 40, then 80 work is being done in exchange for 0 effect." Jake expressed that he was trying to heed the advice "If you want to get 40 out of your muscles, don't increase the agonist by 40; instead, decrease the antagonist by 40." Jake noted in his practice journal that he had previously had an injury diagnosis attributed to "muscle weakness," but that the Alexander Training had led him to see the cause as misuse. He concluded that: "the Alexander Technique teaches us how to *feel* what we're doing...how to *return*...to give ourselves space for physical learning." Jake recounted having learned how to move according to the build of his body and that the resulting motion feels easy.

Vocal Professor's Perceptions of Jake's Experience

In his interview, the vocal professor was able to articulate that Jake is intelligent in his use of the Alexander Technique, which impacted how effective his work with Jake was able to be. He continued that Jake was able to acquire a new habit without becoming light headed, which might occur after suddenly releasing muscles that have been pulled down for a long period of time. The vocal professor reported having noticed Jake's improved coordination throughout the years he had been enrolled at the university. He also confirmed that, while instructing Jake, he had noticed the rib mechanism needing to be more flexible, allowing his head to be more aligned with his body. The vocal professor explained how he would instruct Jake to sit in a chair, lean forward and take a few breaths to feel "the natural phenomenon...of stretching and yawning." The vocal professor explained that this experience permitted his thorax to open up just by virtue of stretching and breathing." He would then take this experience into the standing position. The vocal professor's explained his perception of Jake's progress in the lesson, saying that at first, "Jake's head was over his body in a way that he hasn't usually done." However, he would encourage Jake towards more "delicacy with the ribs." From an analytical point of view, the vocal professor concluded that Jake responds "to gentleness." When Jake applied the technique, the vocal professor described how "his air was just ready" to sing. The vocal professor concluded that what occurred within the lesson "did make a difference" and expressed the view that Jake will continue to reach a

"deeper level of sophistication." He explained further that, by using free movements, the body becomes loose and the person is able to sing with ease. He described how Jake needs to understand the breathing mechanism, "specifically how light the sternum area can be...when one breathes." He continued to explain the breathing process as not breathing only out of the lower or upper part of the chest, "but actually...one does both and he learned that he could coordinate both if he puts his body into action within an activity that had a specific intent." The vocal professor further explained: "the aspects of Alexander Technique that are difficult have to do with primary control." He reported that Jake's "primary change had to do with the breathing mechanism" and allowing the movement to be flexible. The vocal professor recalled Jake experiencing a freedom in his breathing mechanism, through applying this process. The vocal professor concluded that Jake had achieved several accomplishments in the lesson, all of which were linked to the core issue of "what he was doing with breath." He felt that Jake had "freed" his breathing and "had a better understanding of his breath mechanism." As a result, he perceived that "a lot of things fell into place" regarding the use of the instrument (i.e. the student's voice). He reported observing how using his full lung capacity had allowed Jake to produce a quality sound that fit his body. As a general principle, the vocal professor further stated that the Alexander Technique works particularly well with the voice because the "voice is part of the body instrument and the body instrument is what makes the voice go... if the body is not supportive, the voice will not function." Finally, the

vocal professor stated that, as far as he could determine, Jake has been implementing the Alexander Technique's direction in every aspect of his life.

The vocal professor voiced his opinion that Jake's coordination "is a result of vocal instruction that's...in line with Alexander Technique." As a result, he perceived that Jake was able to produce a quality sound: "he just had to set up the situation, and the response of the vocal folds, depending on them being close enough in proximity, them being ready to be flexible so that they would actually vibrate." He continued by referring to the Bernoulli Effect where, if the voice is "set up in...a rigid manner... there is no way the vocal folds could vibrate freely, harmoniously, and move up and down frequency ranges." The vocal professor stated that when Jake allows his body to be flexible in movement, the vocal cords are free to move without restraint to produce a quality sound. He further described the relationship between movement and quality of sound: "if the movements precede the onset, the onset almost always joins in and if one aspect of movement takes place in the system it takes a concerted effort of coordination to do something diametrically opposed while doing the initial action." He continued by offering another explanation: "in other words, if the hands are used in a certain way to describe the way the air moves, it's difficult for the air to do something else, it's just easier to go along with the gang." The vocal professor explained that the movement of the body and airflow work as one unit to be able to produce a quality of sound. He described the change of vocal production within the voice lesson: "I think that what I heard was a brightening

of the voice." He expressed how Jake might have had "discomfort with that because it went higher and brighter than he thought possible." He further reported that Jake was able in the lesson to experience "a pathway of more resonance...he uses his breath in a non-squeezed way." The vocal professor suggested that Jake "will find more resonance" if he "gets out of the basement." He described Jake as having a "C" voice. He explained that "a lot depends on personality, temperament and such things as health, like allergies." He expressed the opinion that the "propensity to have swollen cords all the time" will make the voice "almost always go down." According to the vocal professor, Jake was able to create a quality sound due to following the direction of physically allowing movement within the vocal cords. The vocal professor described that what Jake experienced was seeming to be "out of control... and that's the deal; you have to let it go." The vocal professor further explained that letting go of the muscles releases the constraint or manipulation an individual has on the body. Without that, he explained, the voice is free to do what it needs to do. The change in Jake's voice was described by the vocal professor as an achievement that was "not a finished product, but definitely opened the door."

Researcher's Observations of Jake's Experience

The researcher noted during her observation of the vocal lesson that applying the psychological perspectives of the Alexander Technique appeared to be allowing Jake to comprehend how his body is supposed to function. First, she recorded how Jake is instructed to mimic movement of the vocal professor and to "play" with the

movement. The vocal professor asks Jake to experiment with the new information by moving around the room in various ways. He then asks Jake to sit in a chair, stretch, and yawn, to enable lengthening of the torso. While Jake is singing, the vocal professor helps him create an alignment, verbalizing how this is allowing maximum air in the vocal process. The vocal professor encourages Jake to reassess his body and the capability the body has of bringing in air. According to her field notes, it appeared to the researcher that, with the guidance of the vocal professor in applying the Alexander Technique to particular parts and functions of the body, Jake is able to re-map his body. She recorded evidence of how she sees him standing taller and his chest capacity being increased. The researcher observed a comparison in the way Jake stands at first, having his head slightly forward and how, after this experience, his head becoming aligned with his body. The researcher observed that this concept also affects Jake's continuous motion of his thorax, which appears more relaxed, allowing a supportive airflow. She noted Jake achieving a longer sustained note in his singing.

The researcher further noted that Jake freely experiments with movements he creates while singing. He appears to be assessing the relationship between the head and the rest of himself, by permitting his body to follow the movement of the head. In her notes, the researcher indicated that Jake appears able to defy his original cognitive processes and develop a new habit for natural vocal production in the lesson. The researcher noticed that Jake's physicality changes with more fluid

movements and more direct actions. Jake appears to allow the intercostal muscles to produce more natural movement by consciously choosing not to constrain the motion. The researcher observed that Jake is applying tools of the Alexander Technique in order to move with an ease of motion and change a current habit towards moving more fluidly. The researcher noticed how Jake moves around the room, pointing to various spots on the wall, vocalizing how his thorax was able to expand and contract in a way he has not experienced earlier. The researcher observed that a change in Jake's voice occurs when he realizes the muscles are flexible in both horizontal and vertical movements. Jake appears to allow the tension to release and allow the natural movement of his chest cavity, which seems to help produce a higher quality sound. The researcher's field notes indicated that using a bodymapping perspective appears to enhance Jake's singing ability.

While interacting with the vocal professor, it appeared to the researcher that Jake is able to identify the changes from his experience physically and psychophysically. In her notes, the researcher indicated that Jake is being taught about the Bernoulli Effect and how blowing air through two pieces of paper results in the paper vibrating, similarly to the action of the vocal cords. The researcher observed the vocal professor working with Jake on opening the chest cavity in a forward and outward way in order for the chest to feel as light as a feather. She noted the explanation that, by allowing the muscles to expand and contract, Jake's body is able to cycle through a larger portion of air supply than when the muscles are

shortened or flexed. She reflected in her notes that allowing the expansion of the chest cavity to occur, results in Jake sustaining a note for a longer period of time and creating a clearer, fuller sound.

Miriam's Perceptions of her Experience

Miriam has been taking classes in Alexander Technique for a period of one year. In her interview, Miriam reported having learned in Alexander Technique classes that not having a psychological perspective of the body can deter normal functions from occurring. She explained her view of body-mapping: "I think that you only will be singing to the best of your ability if you actually understand the way your body works correctly...the way your body is built." Miriam further explained that misconceptions regarding bodily functions might be like driving "a truck while facing in the opposite direction of the wheel...you could probably figure out how to do it, but it's certainly a lot easier when you know what's actually happening." She described her first lesson with the master teacher of the Alexander Technique: "we drew our own map...I found out that...I was trying to be taller." She explained that becoming aware of this and working to avoid constraining muscles, and manipulating her movements in a more natural way, allowed the audience to connect with her and relate to her better. Miriam explained that it was her work with the vocal professor that helped in applying the concept of body-mapping for singing. Miriam explained that her ability to move had changed while enrolled in the Alexander Technique course, having previously been "hindered by the problems

that many people, especially women experience in culture: in the sense that you suck in your stomach, you hold yourself like this so that your chest looks bigger or your butt is smaller." She described how, after implementing the Alexander Technique into her daily activities, she is able to notice the habits of misuse and is learning how to correct them. Miriam recounted how "all of the work I've done in class...has been to contribute to my quality of breathing...learning how to both open my chest and my back at the same time." Miriam explained learning how the thorax moves naturally, without constraining her muscles, and using every part "to benefit the breath."

Miriam described being taught, prior to attending college, a manner of breathing in which the lungs were only half-filled and the stomach and diaphragm were expanded. However, this was done with no awareness of the actual size and capacity of the lungs or the movement of the rib cage. Miriam explained not having realized that there was a rising motion, in addition to the expansion. Having learned about the different movements of the chest cavity, Miriam mentioned that she feels "freedom of motion" in her upper body, which she said, "has improved the most" and that additional knowledge and awareness has given her the ability to rely on her "hips and girth" to sing. Miriam referred to her ability to implement what she is learning into her vocalizing, saying that learning anything new "is difficult at the beginning...but the Alexander Technique is...all about freedom of motion and ease of motion." Miriam continued to explain: "when I am able to achieve what we work

on in the class, it never feels like it was hard because...you're letting it happen naturally." Miriam stated that when she applies the directions of the master teacher, she does not feel strain or tension, but rather ease in implementing the Alexander Technique.

Miriam explained that she had developed the ability to use her mental capacity to initiate new habits in place of her previous ones and incorporate the Alexander Technique into her daily practicing sessions. She described the cognitive process further:

I'll sing something in choir and I'll say, 'wow my voice is really tired, I wonder why that is?'...and I'll try to sing the phrase again...even just work something else in the phrase again...and say, 'well this is what I'm noticing in myself, what can I do to change...using what I have learned in my Alexander class or from the vocal professor?

She continued: "I'll try out a few things and when I find something that works, I'll use it ...if for some reason it stops working after a while, I'll try to reassess it."

Miriam explained that she is still learning about using her body "as a whole" and "inhabiting" all of herself and being aware of all of herself. She explained that, working with the vocal professor in applying the Alexander Technique had encouraged her in the aspect of using the whole body while singing, and that she had experienced a new-found freedom in her breathing mechanism, as well as a change in her vocal production and sound quality.

Miriam recalled that when she is aware of herself, "physically and emotionally" she can sing for longer because she knows how to "take care of the

parts that would otherwise be tired in performance." Miriam continues to explain that when she is performing she is able to "assess from both an internal and external point of view." Miriam described that she feels warmth throughout her body when she is fully aware of herself during singing. Miriam expressed her assessment that the Alexander Technique has given her the ability to improve her quality of sound. She said that improving her use of her body in both her daily lifestyle and her singing has positively impacted her voice. She explained evidence that "people who haven't heard me for a while, they notice a difference." Miriam further commented that her voice "feels more full, more free, I notice I don't have to work as hard to produce a run or any...technical thing that otherwise would have been difficult." Miriam reported that the difference in her vocal production and quality of sound has improved since enrolling in the course. In her practice journal, Miriam provided evidence that she practices with an awareness of her body, allowing natural movement to occur. For example, she described using movement in order to feel stability in her breath mechanism. She explained having great ease in singing high notes and long phrases when releasing the stomach muscles "instead of bearing down and contracting in an attempt to 'force the strength' needed for the phrase." She noted an improvement in movement during the practice session, being able to feel an expansion in her core, which creates a stability of breath support. Miriam wrote that, with the work of the Alexander Technique, she is aware of the tension in her body and reminds herself to allow her muscles to move naturally in order to have

the same stability of breath as she feels when she is sitting. Miriam concluded in her journal that there was an improvement in her breathing while incorporating the Alexander Technique.

Miriam further recounted in her journal that she practices being aware of her body and how each part feels in order to "sing well." Miriam explained being aware of her breath mechanism, trying not to bear down on the breath when issuing breath support. Miriam noted falling back into previous habits, especially when she is sick or has allergies, but being able to reassess and reenact the experiences the master teacher has provided. Miriam also recorded being able to produce a quality sound with the movement of her body, her work with the Alexander Technique enabling her to comprehend the work within herself.

Vocal Professor's Perceptions of Miriam's Process

The vocal professor identified progress Miriam had made using the body-mapping concept. He described encouraging Miriam to recognize negative experiences in her past or present and to then not allow them to be psychologically available during singing. He explained that psychological hindrances could cause an inability to move certain aspects of the body and that once they are identified, the singer is free to inhabit all parts of the body without negative connotations. The vocal professor attributed a big part of Miriam's progress to "epiphanies of how her body is put together."

The vocal professor explained that when a person studies materials beyond "one's chronological age," this makes it difficult "because there's not an adequate amount of time for developing the psychological basis to handle the sophistication of advanced years." Due to this difficulty, he perceived Miriam as having trouble "releasing" because of the inability to trust her body to sing without forcibly manipulating the movement. According to the vocal professor, Miriam has achieved "greater flexibility of breath...a lengthening for singing high" He continued to explain that the Alexander Technique "makes the system work more coordinately and...we've been able to accomplish technical growth that she hasn't had before." The researcher observed that Miriam has implemented the technique and has improved with the changes in her bodily movements, having become more fluid and functioning as one entity rather than as many parts.

The vocal professor further described an occurrence in the voice lesson when he said: "let's try...a drop over," which takes away the old habits in upright standing, and takes her out of those habits by putting her in a chair or having her drop over and start from a more neutral stance. He explained that, when the body has an unfamiliar experience, "new things can happen." He further described the "back breath" technique as "a single gesture, dropping over, inhaling, continuing inhaling, standing up and releasing all in one fell swoop action: its continuous." The vocal professor stated that having the student experience a new technique allows for pulling out of the old habit, allowing the body to move without constraint. The vocal professor

"dropping over...allowing air to come in and start a movement upward that is moving and releases the tone...and that helped a great deal because the...thorax, the lungs, the ribs, were more extended and could stay put strength was there for a short amount of time that enabled the voice."

In the vocal professor's perspective, Miriam's progress is mostly related to the concept of body-mapping. He recounted that, in the previous lesson she had been "running out of air," with the ribs "depressing... dropping down and pushing on the sternum area at the end of the breath cycle." He commented that in these issues with her breath support, he was clearly able to identify Miriam's ability to incorporate the Alexander Technique. He explained being able to see progress in how Miriam is using her body naturally in each lesson.

The vocal professor explained that, due to Miriam's low body weight, it is difficult for her to develop the type of support that is necessary for singing. By asking her "what did you learn about your body?" he helps her realize what she needs to do to help further her abilities. He continued to clarify that Miriam is learning about her body and how to deny old habits, while actively using her body to sing well.

The vocal professor commented how Miriam's vocal abilities continue (with the exception of illness) to become "more opulent" and more flexible. He described his current work with her as "moving farther away in terms of support and foundation of the voice." He explained that this work "is happening farther away from the throat, which bodes well for the production of a clear tone." He further clarified that when a singer vocalizes with pressure in the throat, the sound is harsh and pushed, but rather, he sees Miriam as learning to use her whole body rather than only the vocal cords. The vocal professor confided that there has been a change while working with Miriam in her voice lesson. He described that "the thing that I hear is a greater opulence of tone from top to bottom." He described working on the mechanism that articulates tongue, lips, and mouth, and using words to "get into sound" or to "pave the way into sound," especially with consonants that block the free flow of air in a phrase. He recounted modifying those, and working on certain other ideas with vowels." The vocal professor concluded that Miriam's vocal production produces a sound that consistently improves with the more natural functioning of her bodily movements.

Researcher's Observations of Miriam's Experience

The researcher's field notes indicate that the professor is helping Miriam feel the full capacity of her chest and visualize more accurately where her arms connect to her body. This was evident in the researcher's description of how Miriam's elbows are no longer held tightly to her body, but her entire arms are being used in natural movements, complementing the expansion and contraction of the chest. The field notes document how, while working with the vocal professor, Miriam receives instructions that encourage her breathing abilities. The vocal professor then has her

stretch while sitting in a chair to allow the ribs to experience an ease of movement. The "back breath" technique developed by Lara Browning was then explored with Miriam. The vocal professor instructed Miriam to bend over, begin breathing, slowly stand and begin to sing. The vocal professor explained that the use of the "back breath" allows the muscles to move according to what is needed rather than manipulating the movement.

The researcher's notes describe the vocal professor directing Miriam to sit in a chair and stretch her torso to restart the bodily connection. The researcher noted Miriam working with the vocal professor in order to improve her ability to sing and create quality sounds. Further notes refer to Miriam making connections between vocal technique and the Alexander Technique. The researcher observed the vocal professor direct Miriam to loosen her facial muscles, which initiated a sensation that he says she can remember and reenact. Miriam stands while the vocal professor energetically guides her to a place in her body that needs more movement by placing his hands on her back. The researcher reported Miriam's voice sounding full as she permits the specific movement of her chest cavity. Further points refer to the vocal professor noticing that "the body is not as pliable in many cases as it could be" and encouraging Miriam to apply movement in the body and ribs, which included lateral movement not only vertical.

Stephanie's Perceptions of her Experience

Stephanie has taken one ten-week course in Alexander Technique. In her interview, Stephanie described her early experiences of body-mapping and its effect on her vocal production. She recounted how the master teacher asked her, "where does your jaw connect?" She pointed under her ears, to the pointy part of her jaw. She explained that "he showed me the proper place and that just changed my world." She suggested that this changed her perspective of how her jaw functions and changed the way she uses her jaw in singing. Having learned about numerous parts of her body she said, "I'm very conscious of where all of my joints are and how I'm supposed to be standing" or moving.

Stephanie recalled experiencing an enhancement of bodily movement while enrolled in the Alexander Technique course. She described how the implementation of the Alexander Technique had changed her ability to move by thinking differently about each movement and feeling her body alignment. She continued to explain that when she understands where her joints and body parts are, the movement feels free and comfortable. Stephanie reported that the vocal professor has encouraged her progress by helping her become aware of where her body is tense; identify why it is tense; and allow movement in that area.

Stephanie further explained that applying the Alexander Technique allows her to breathe with the full capacity of her lungs. She described being taught by the master teacher to notice where her lungs, rib cage, and abdomen are situated, as well

as how they work together when she breathes. Stephanie explained that she becomes aware of her body by placing her hands on her rib cage to remind herself how it moves and to allow freedom of motion. Stephanie reported that she incorporates her knowledge from the Alexander Technique club while breathing by saying, "I don't just work on the top part and I don't just work on the bottom...it helps me take bigger, deeper, fuller breaths, and...it's not painful." She further explained her cognitive process in implementing the technique, "as soon as I ...stand up [I] consciously think about...how I should be standing and where my ribs are." Stephanie recalled that she is able to cognitively visualize where her lungs are, the rib cage, and the movement that is involved in order to allow the breath to flow with ease.

Stephanie mentioned having a positive outlook on the incorporation of the Alexander Technique into her vocal production. She recalled having some difficulty in finding where she's supposed to breathe, but that, when thinking about her ribs and how she is standing, it "all...goes together." From the tools given at the Alexander Technique classes, Stephanie explained: "if I have a lot of tension in my jaw...I'll...go through the motions of finding all the tense places in my body and...look at it...from the inside and try to envision everything." Stephanie explained that incorporating the Alexander Technique allows her to be attentive to her body, resulting in a quality sound.

Stephanie described feeling a change when using her body as a single entity while singing, and that this process enhances her vocal abilities. She continued: "when I just start singing... and realize I'm not doing it right... I could produce a better sound...I'll think: 'what can I do with my body to be able to produce that better sound?" Stephanie affirmed that she is able to assess how her body feels and remedy the tension by releasing the muscular structure to natural motion. Stephanie volunteered an example of when she is singing in her room at a keyboard: after a while, she walks or stands, which helps her feel every part of her body. Stephanie described that, in order to change her movement habits, she'll consciously think about her breath. Stephanie continued to explain: when "standing and... walking and...doing my breath correctly...my tone is going to [sound] ten thousand times better."

Stephanie described having experienced a quality sound from using her body while singing as taught in the Alexander Technique club. She explained how her body feels to produce a quality sound: "it's very freeing...I just feel everything is working as it should." She continued to describe in more detail what she feels by saying, "my tongue is loose and free and down and not tensed at all; my jaw is just sitting, I'm not trying to open and close it; the inside of my mouth is just open and doing its thing; it's really effortless." Stephanie clarified that when she is implementing what she has learned from the Alexander Technique, not only is it "one of the best feelings ever," but it also helps her produce a "ringing pure,

beautiful sound." Stephanie explained that she is able to identify the tension in her body and release it by using her cognitive processes to alleviate the symptoms.

In her journal, Stephanie reported that her incorporation of the Alexander Technique has been helpful in being aware of her body, in identifying the movement of the body and in allowing flexibility in her breathing mechanism. She noted that, by incorporating the concept of body-mapping into practice, she experiences improvement in her singing abilities. She explained knowing that she is implementing the concept correctly when she feels "no pressure" in her movement. She also noted incorporating what she had learned at the Alexander Technique club by assessing her bodily movements and attempting to reenact the experiences she had with the master teacher. Stephanie recalled that her ability to move has received attention in both the Alexander Technique club and voice lessons. She further recorded in her journal that she is aware of the movement of the sternum, and the expansion of the lungs, which causes the motion to feel natural and easy.

Vocal Professor's Perceptions of Stephanie's Experience

In his interview, the vocal professor reported recognizing Stephanie's progress after she began incorporated the concept of body-mapping. He suggested that, according to her personality, she is able to envision her body parts to comprehend how they look and function. He explained that Stephanie has a tendency to "squeeze her body" in order to sing through a phrase. However, when she learns not to squeeze, her vocal sound is full and "she usually floats...out of a lesson, not

being able to believe it." He described how, during the voice lesson, Stephanie places her hands on her rib cage to help herself be aware of the movement, which also encourages the lower abdomen to drop. He explained that this process permits the voice to "move on its own rather than being manipulated." He further described that Stephanie is quickly able to notice movement, rather than trying to analyze what she is doing to "keep from getting stuck."

The vocal professor comments on Stephanie's breathing issue that she has a "very congested nasal passage way at the top of the bridge of the nose." He further described the nose passage as being so small that "it's very difficult to inspire a breath through the nose that is not audible." This issue, he explains, will be solved in multiple ways, including visiting an ear, nose and throat doctor. The vocal professor describes what he does to help Stephanie sing: "what I've learned to do is to slow it way down so that the audibility means you have to move air with less velocity and that means between phrases, stopping." He explained that, due to the problem of a congested nasal cavity, there is a tendency to squeeze the air out of the body and he guides movement to allow flexibility when breathing. He commented that Stephanie is doing very well despite the physical boundary that keeps her from her potential.

The vocal professor described that "what I can do is take her through...inside herself and I say, "go to the inside of the back of your skull and look from inside to the inside of the skull" and that has changed her sense of herself. He described asking questions: "what about...inside the bones; can you go down the femur and see

the inside of the bone and blood vessel?" He concluded that this kind of process "enlivens her sense of self and her whole being becomes aware by just talking about that." The vocal professor explained that when Stephanie becomes aware of her body, she has the ability to allow movement and produce a flexible environment for the voice. He expressed the opinion that Stephanie is well able to identify and notice progress in her vocal abilities as a result of applying the Alexander Technique.

Researcher's Observations of Stephanie's Experience

The researcher's field notes on Stephanie's vocal lesson reflect that she is constantly thinking about her jaw in order to not pull it back and to allow it to move naturally, evident in how she places her hands on her jaw and verbalizes this process. The researcher further noted that the vocal professor discusses a need for Stephanie to re-educate herself about her body: how it moves and works. Due to this work on improving understanding of herself, Stephanie appears to show progress in her abilities to sing and move. The researcher observed Stephanie's ability to incorporate verbal directions from the professor into the movement of her body, noting how her movement changes and, standing taller and movements wider. The researcher also noted the vocal professor giving directions on improving herself to produce sounds that are of quality. She observed him identifying Stephanie's issue with her nasal cavity congestion and her resultant inability to sing to her potential. Stephanie confesses that, due to this inconvenience, she becomes aware of her body in every aspect of movement to produce quality sound.

The researcher noted that Stephanie appeared to develop her breathing mechanism during the lesson seen in how she works on experiencing a feeling of movement of the chest cavity by allowing the spine to follow the head. Furthermore, Stephanie is guided by the professor to identify what is occurring in her body through using her imagination. Stephanie is given instructions in how to accomplish producing the pure sound on her own. She notices her voice reaching a really high pitch, which surprises her. The vocal professor explains to Stephanie that this work improves her mental capacity to understand her ability to sing quite high and with an ease that she has not previously experienced.

Comparisons between Perceptions of Participants

The perceptions expressed by all the participants show several trends. The first is the perception that the Alexander Technique involves a psychological conceptualization of body mapping. This was expressed in terms of awareness of the body, its size, components and functions. The master teacher used expressions such as "knowing the specifics of the body," Jake reported that body-mapping has changed his ideas about himself, his size, and how his body functions. He described applying the concept of body-mapping in singing. Miriam referred to a greater "awareness of her body." The vocal professor confirmed her progress related to the concept of body-mapping, attributing a big part of her progress to "epiphanies of how her body is put together." Stephanie described body-mapping and how this changed the way she uses her jaw in singing. The vocal professor remarked on

Stephanie's progress after incorporating the concept of body-mapping, being able to envision her body parts to comprehend how they look and function.

Secondly, all participants spoke in detail about the need to recognize physical habits that cause tension and inhibit the full potential for vocal production. They all discussed processes of visualizing detailed parts of the body and feeling how their movements or positions caused tension. For example, the master teacher mentioned how humans often unwittingly create habits that might inhibit freedom of movement. Miriam mentioned recognizing tension in her body. The vocal professor confirmed Miriam's addressing of old habits. Stephanie described identifying the tension in her body and releasing it by using her cognitive processes to alleviate the symptoms. The vocal professor confirmed that Stephanie avoids the old habit of squeezing.

Thirdly, all participants referred to replacing tension in body movements with natural, ease of movement. For example, the master teacher used this description: "the Alexander Technique is a technique for improving freedom and ease of movement" and "allowing the body to move naturally." Jake recalled consciously allowing a habit to discontinue by replacing it with a new habit which he experienced with the master teacher. He reported experiencing an ease of motion. Miriam mentioned correcting old habits and "allowing natural movement to occur." She also referred to feeling "freedom of motion." The vocal professor confirmed Miriam's more natural functioning of movements. Stephanie described: "releasing

the muscular structure to natural motion...it's really effortless." The vocal professor commented on witnessing Stephanie improving her awareness of movement.

All the participants specifically referred to breathing. For example, the master teacher explained the need for being attentive to the movement of the rib cage and helping students create more space for the lungs to expand, allowing room for a larger flow of air. Jake mentioned feeling the space that is needed to let air in and out of his body and allowing full movement within the rib cage. The vocal professor confirmed observing Jake using his full lung capacity. Miriam mentioned a newfound freedom in her breathing mechanism. Stephanie explained how the Alexander Technique allows her to breathe with the full capacity of her lungs.

Participants also mentioned how experience in the technique infiltrated their daily lives, not just singing. For example, Jake mentioned incorporating the tools of the Alexander Technique into his everyday life, stating: "every second of life is an opportunity to practice the Alexander Technique" and "one of the things that's joyful about the Alexander Technique is that it's so broad...it can be applied to everything in your life." Miriam referred to applying the technique in the ways she used her body in her daily lifestyle.

Perceptions of all participants regarding positive impact on vocal production are well matched. The master teacher expressed his expectation that if students use themselves freely and are not constrained in their movements, vocal production will

improve. He also spoke about the technique enhancing the students' abilities to sing and to produce quality sound.

The first key outcome described by all participants pertained to improved ability to sustain breath in singing long notes and phrases. The researcher noted Jake achieving a longer sustained note in his singing. Miriam reported being able to sing long phrases.

The second major outcome was achieving a wider vocal range. Jake recounted being able to sing "much higher." Miriam described acquiring great ease in singing high notes when releasing the stomach muscles. This was confirmed by the vocal professor: "Miriam has achieved a lengthening for singing high."

The third outcome in vocal performance was perceived by participants to be a greater fullness and quality in sound. Jake stated that he has experienced a quality sound, being able to sing "much ...easier, and fuller." The vocal professor expressed his agreement that Jake created a quality sound, describing his voice as being "brighter" and "more resonant." Miriam explained: "people who haven't heard me for a while... notice a difference." Miriam commented that her voice "feels more full, more free." The vocal professor confirmed Miriam's perception on vocal improvement, using expressions such as "a greater opulence of tone" and "a sound that consistently improves." Stephanie described this process of applying the Alexander Technique being "one of the best feelings ever," that helps her produce a "ringing pure, beautiful sound."

No specific disparities were noticed between participants' perceptions, however minor diversity was reflected in two items pertaining to psychological processes. The one example was a focus on identifying and putting aside previous negative experiences observed in one student's lesson. The only explanation provided by the professor was "that psychological hindrances could cause an inability to move certain aspects of the body and that once they are identified, the singer is free to inhabit all parts of the body without negative connotations." The other additional item in one case was a mention of personality. The vocal professor suggested that, "according to her personality," Stephanie is able to envision her body parts to comprehend how they look and function. However, no explanation was given. Jake mentioned his voice becoming more in line with his personality, however he did not mention it being a factor in process or outcome.

Comparisons between Perceptions Articulated in Different Forms of Data

The perceptions recorded in student journals matched those articulated in their own interviews as well as the perceptions expressed by the master teacher and vocal professor. The practice journals indicated more details of what students experienced in applying the technique than was revealed in the interviews. The journals all recorded a perception of overall success in the impact of applying the technique in practice. The notes of the researcher during field observations also mirrored perceptions on process and outcomes expressed by the participants.

Jake's journal confirmed perceptions articulated in his interview, evidenced in expressions such as: assessing himself in his manner of moving; paying attention to allowing the tension to release; changing a habit after experiencing new modes of operating; and being able "to sing much higher, easier, and fuller."

Miriam's journal confirms her verbally-stated perceptions of being aware of her body, being aware of tension, working on previous habits, working on breath support; allowing natural movement to occur; producing a quality sound; improving her breathing and achieving ease in singing high notes.

Stephanie's journal confirmed being aware of her body; identifying the movement of the body; allowing flexibility in her breathing mechanism; incorporating the concept of body-mapping into practice; considering expansion of the lungs that causes the motion to feel natural and improvement in her singing abilities.

The researcher's observations also confirmed the perceptions articulated by the participants. The researcher perceived Jake being able to re-map his body; his body being held taller and his chest capacity being increased; aligning his head with his body; changing a current habit of constraining motion; develop new habits of more fluid movements; freely experimenting with movements and moving with an ease of motion. As regards outcomes, she perceived Jake producing a higher quality sound; enhancing his singing ability; sustaining a note for a longer period of time and creating a clearer, fuller sound.

The researcher confirmed participants' perceptions on Miriam implementing the Alexander Technique: her bodily movements becoming more fluid and functioning as one entity; her elbows no longer being held tightly to her body; her entire arms are being used in natural movements; and her voice sounding full as she permits the specific movement of her chest cavity.

Finally, the researcher perceived Stephanie working on movement in her jaw in order to not pull it back and to allow it to move naturally. She noted Stephanie's movements becoming wider and that she is standing taller. She also observed how Stephanie develops her breathing mechanism; loosens her facial muscles; reaches a high pitch; shows progress in her abilities to sing and move; and improves herself to produce sounds that are of quality.

Summary of Results

In this case study, perceptions of a master teacher, vocal professor and three students, all of whom are involved with the Alexander Technique in vocal production at a University in the USA were recorded through interviews, practice journals and field observations and analyzed for trends and disparities. Data were analyzed, determining consistent trends between all the participant's perceptions of the processes involved in applying Alexander Technique in vocal production. These primarily involved improving body awareness through "body mapping," identifying physical habits that cause tension, and replacing these with natural freedom in movement. Furthermore, there was parity in perceptions on positive outcomes in

vocal production, including ability to sustain notes and increase the range, fullness and quality of the voice. Minor disparities were indicated between perceptions on process, such as specific psychological focus and reference to personality. Links were found between perceptions articulated in interviews, journals and field observations regarding both process and outcomes.

Chapter 5: Summary, Discussion and Conclusion

This chapter provides a short summary of the results, followed by a discussion. Implications for the profession are highlighted, as well as suggestions for further research.

Summary

The purpose of this study was to investigate perspectives on the process and outcomes of applying the Alexander Technique in vocal production. The approach was that of a case study, conducted at an institution of higher education in the United States of America where instruction in the Alexander Technique is available on campus to vocal students. The study population included a master teacher of the technique, a vocal teacher who applied this approach in his teaching and three vocal students who have studied the technique. The key research instrument was a script for the interviews of the participants that consisted of open-ended questions designed to answer the research question: What are perceptions on the process and outcomes in applying the Alexander Technique in vocal production? Other forms of data were collected that provided additional evidence, including field notes taken by the researcher during observations and practice journals of students. Data were analyzed, determining consistent trends between all the participant's perceptions of the processes involved in applying Alexander Technique in vocal production. These primarily involved improving body awareness through "body mapping," identifying physical habits that cause tension, and replacing these with natural freedom in

movement. Furthermore, there was parity in perceptions on positive outcomes in vocal production, including ability to sustain notes and increase the range, fullness and quality of the voice. Minor diversity was determined between perceptions on process, with additional focus on a specific psychological process in one case and a reference to personality in process in another. Health issues were addressed in process with one student only, as it related to her health conditions. Links were found between matching perceptions articulated in interviews, journals and field observations regarding both process and outcomes.

Discussion on Site and Participants

The university selected for this study was certainly in close proximity to the researcher and served as a site of convenience. However, this particular university was particularly suitable because of the presence of the Alexander Technique in the music department. This was evident in the student club formed to promote training in the Alexander Technique, providing weekly lessons by a master teacher who is world-renowned as an authority in the field. This master teacher extended the concept of body awareness to the process termed "body mapping" which involves a detailed psychological perception of the body. Furthermore, the vocal professor is the faculty advisor for the club, attending all sessions. He has therefore been exposed to many years of exposure to the training of this master teacher. In addition, he has participated in courses nation-wide in the technique. He also applies the technique in

his studio vocal classes at the university. The three students have all participated in the courses offered by this master teacher at this university.

Discussion on Results

The trends noted in the perceptions of all participants offer evidence that the application of the Alexander Technique offered in the classes of the master teacher are being well projected into the practice of the students. Furthermore, the vocal professor clearly mirrors the practices taught by the master teacher in his own teaching. The data provided evidence that these same processes are implemented by students in the private practice, being characterized by references to the structure of the body, its size, movements and functions. The outcomes perceived by the participants all refer to terminology indicating ease in singing. There are consistent perceptions that this natural movement avoids physical tension that impedes vocal production and appears to result in greater ability to sustain notes, a perception on outcome confirmed by the vocal professor and the students. There is a common perception that application of the technique allows vocalists to reach a wider range of notes. This is confirmed in the various student journals and researcher's field observations. The data also indicates perceptions on positive impact on improving fullness and quality in vocal production. These were also confirmed in the journals and observations. These trends provide strong evidence of positive experiences of all participants in both process and outcomes when applying the Alexander Technique to vocal production.

There is a link between the length of the interviews with student participants and their period of exposure to classes in the Alexander Technique. This makes sense, as the students with more experience had correspondingly more to say about what they were experiencing.

The researcher notes that the incidences of diversity were minimal.

Regarding the one example in a student's lesson in which personality was mentioned in process, no detailed explanation of this perception was articulated. One further example referred to the identification of negative psychological experiences and needing to set those aside, not allowing them to be part of the body experience. Little detail was provided on perceptions regarding personality in process. It would be interesting to follow up and find out whether these aspects had been a part of the training by the master teacher, or an addition of ideas inserted by the vocal teacher either related to the technique or not. In the case of one student, there was specific work on physical health issues through applying the Alexander Technique.

The extent to which the perceptions of the participants were well matched provides a clear indication of the clarity of the processes involved in this approach and their translation between the participating master teacher, professor and students. Furthermore, there is strong evidence that both process and outcomes in vocal production were perceived in extremely positive terms by all participants.

Implications for Music Education

While the results of this case study are not generalizable, the implications for Music Education are that, alongside a body of developing research literature, there may be increasing indication of the value of including Alexander Technique in vocal programs at higher education institutions. The vocal music education profession may be encouraged by the positive perceptions determined in this institution, to explore implementation of the Alexander Technique in their institutions to determine its possible value in their own settings.

Recommendations for Further Research

The researcher suggests that further case studies in this field might expand a body of knowledge that would contribute to our understanding of the process and outcomes of Alexander Technique in vocal production. Furthermore, it is recommended that experimental research involving treatments of applying the Alexander Technique in vocal production, with pre- and post-tests, may offer further evidence that would be valuable to the vocal music education profession.

Conclusion

In this case study, perceptions of a master teacher, vocal professor and three students, all of whom are involved with the Alexander Technique in vocal production at a University in the USA were recorded through interviews, practice journals and field observations and analyzed for trends and disparities. Consistent trends were determined between all the participant's perceptions of the processes

involved in applying Alexander Technique in vocal production. These primarily include improving body awareness through "body mapping," identifying physical habits that cause tension, and replacing these with natural freedom in movement. These perceptions of the process all appeared to reflect positive experiences. Furthermore, there was strong parity in all the participants' perceptions of positive outcomes in vocal production when applying the Alexander Technique. These outcomes included ability to sustain notes and to improve the range, fullness and quality of the voice. Minor diversity was indicated between perceptions on process, such as the addition of one specific psychological focus during one student's lesson and one reference to personality in another student's lesson. Links were found between perceptions articulated in interviews, journals and field observations regarding both process and outcomes, indicating a strong match.

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Appendix A: Consent Form

A case study investigating perceptions on the impact of Alexander Technique on vocal production

PI: Amanda Dick, Graduate Student in Music Education, Music Department, EWU (509) 359-2223, (253) 951-8576

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Purpose and Benefits

The rationale for this study is the need for evidence of the outcomes of the Alexander Technique on vocal production. It is important for the profession to not only have anecdotal knowledge about the impact of the Alexander Technique on vocal performance, but to have detailed information based on rigorous research investigations. The purpose of this study is to discover perceptions on the impact of the Alexander Technique on vocal production. While much literature exists on the technique itself, there is little research on the outcomes in the area of vocal production. It is anticipated that investigating the perceptions of professors and students of this technique on the impact of this on their vocal production will provide valuable information for the profession.

Procedures

Each participant will be interviewed and observed. It is anticipated that interviews will take up to 60 minutes of each individual's time. Once results have been written, the participants will be consulted on the results and their comments or additional information solicited. This follow-up session will likely take no more than thirty minutes. Participants will be asked for copies of documents, including relevant syllabi, course notes and any journals pertaining to classes and practicing. Examples of questions will be:

- 1. Alexander Technique Instructor: What are your expectations/intentions in how the approach should impact the student's: breathing, knowledge of body, movement of body, vocal sound, quality of sound, comprehension of applying what is taught?
- 2. Vocal Professor: How have you observed the approach to impact the student's: ability to breathe, produce quality sound, use the body to enhance vocal abilities, alignment, and embouchure?

3. Students: How has the approach impacted your: body mapping, ability to move, ability to use the body to sing, ability to breathe, produce quality sound, ease of applying the technique to the vocal process?

The interviews will be audio recorded and later transcribed, at which stage the audio recordings will be destroyed. Your permission is required to do the recordings. "Washington State law provides that private conversations may not be recorded, intercepted, or divulged without permission of the individual(s) involved."] All data will be stored without identifiers and

Risk, Stress or Discomfort

It is anticipated that there will be no risks, as questions will pertain to activities and outcomes within the field of professional specialization, rather than personal matters. However, should participants feel any part of the process to be an invasion of privacy, they are welcome to withold specific information or to withdraw participation completely.

Other Information

Apart from the Master Teacher who has volunteered to be identified in the study, the participants will not be identified in either the data or the report. Any documentation that includes names will have the names deleted and will be coded. Coded documentation will be converted to digital format and stored on the researcher's password protected laptop computer. The interviews will be audio recorded onto two devices as a safety measure and this data will be coded. These will be stored in the researcher's locked office or locked home. The coded recordings will only be stored for the period required to complete the transcriptions. This is expected to be a period of about two weeks. Once the coded transcriptions have been completed, the audio files will be deleted. The transcriptions will be stored on the researcher's password-protected laptop computer. No names will be stored with any data. The list of codes will be stored on a laptop computer belonging to the researcher's advisor.

Involvement is strictly voluntary and that there will be no reward for participation, nor will there be any penalty for non-participation. Participants may withdraw from the study at any time should they wish to do so, with no penalty arising. There are no anticipated direct benefits to the participants. However, the results of the study may inform the profession with knowledge that may indirectly benefit the participants at a later stage. The alternative to participation is non-participation.

Signature of Principal Investigator	Date

activity (study, research, etc. as appropermission to record, intercept, and/oduring this activity (study, research, etc.)	explained to me, and I voluntarily consent to opriate). I have had an opportunity to ask que or divulge conversations (as appropriate) in vetc. as appropriate)."] I understand that by signerstand that I will receive a signed copy of	estions. I give which I participate gning this form I
	Signature of Subject	Date

If you have any concerns about your rights as a participant in this research or any complaints you wish to make, you may contact Ruth Galm, Human Protections Administrator (509-359-6567).

Appendix B: Interview Script

Instrument

A script was used for interviewing all study participants, with slight variance between the interviews of the master teacher, the vocal professor, and the students. The script was used as a basis for the investigation, but was expanded as the conversation developed with each participant.

Interview Script

- 1. Alexander Technique Instructor: What are your expectations/intentions in how the approach should impact the student's: breathing, knowledge of body, movement of body, vocal sound, quality of sound, comprehension of applying what is taught?
- 2. Vocal Professor: How have you observed the approach to impact the student's: ability to breathe, produce quality sound, use the body to enhance vocal abilities, alignment, and embouchure?
- 3. Students: How has the approach impacted your: body mapping, ability to move, ability to use the body to sing, ability to breathe, produce quality sound, ease of applying the technique to the vocal process?

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