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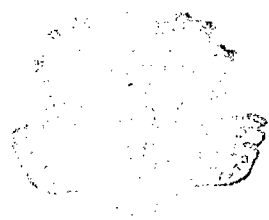
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THEATRE VOICE TRAINING

IN

SPEECH PATHOLOGY

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Submitted in fulfillment of the requirements for the degree of

Master of Applied Science

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DECLARATION

This is to certify that this thesis has not been submitted for a higher degree to any other university or institution. The source of the information contained herein is original and is solely the work of the author except as indicated in the text.

A handwritten signature in black ink, appearing to read 'Lucy Cornell', with a stylized, cursive script.

Lucy Cornell

16th July, 2001

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ABSTRACT

Voice specialisation encompasses a number of voice disciplines. The methodologies, training and philosophies for each discipline differ, but the medium in which they practice is the same: voice. This study aims to provide information about the outcomes of integrating two of these disciplines, spoken voice for the actor and voice specialisation in speech pathology. It examines the effect of voice techniques as used in theatre voice training on a group of speech pathologists. It explores the effect of experiential voice training ('learning by doing') as opposed to theoretical voice training ('learning by talking about'). Its aim is to reveal how some techniques and methodologies in a theatre voice approach might enhance the conceptual skills and clinical approaches of a voice specialist in speech pathology.

Qualitative and quantitative research methodologies were used in this study, which involved a group of 6 practicing female speech pathologists. They underwent a training weekend of theatre voice techniques examining voice from physical, perceptual and sensory levels as well as considering the effect of language choice on vocal outcomes. In addition, a more intensive theatre voice training course,

over a 4 month period, was taken by 2 speech pathologists from the initial group.

Data was collected from the 6 subjects over three periods; pre-training, 1 week and 4 months after the initial training weekend. At each of these intervals there was a questionnaire, which required participants to answer questions based on their subjective observations of their voices, describing their approaches to voice and perceptions about voice. Additionally, they were asked to describe shifts in clinical practice, resulting from the training. At 1 week and at 4 months, the subjects were also interviewed regarding their perception of their voice.

The results show that the theatre voice training significantly shifted the speech pathologists' concept of voice and that there was significant carry over from their own experience into clinical practice.

These results have direct implications on speech pathology training and clinical practice. They also offer valuable information for the voice community, supporting current interest in cross-fertilization of knowledge between vocal disciplines.

INTRODUCTION

People who work with voice, whether in the arts, medicine or science, soon become aware that they are working with more than a physical mechanism. They work with the entire human being; body and soul. The human voice is highly sensitive and subtle. Its function is to express the intricacies of human thoughts and feelings.

If the function of the voice were simply to express ideas, then a physiological approach would be adequate. But human communication is much richer than merely the exchange of thoughts. To survive we must also express feelings. Anything less than a total communication of ideas and emotions is shallow and frustrating for the listener and speaker alike.

Actors and singers have always known that total communication, a balance of thought and feeling, is demanded by their audience.

Words, words, mere words.

No matter from the heart.

Shakespeare (Troilus and Cressida, Act 5, Scene 3)

Actors, even earlier than Shakespeare's time, have understood the power of the human voice to move the soul. The Greek amphitheatres were constructed to resonate with the actor's voices. Today's theatre voice specialists keep this powerful vocal tool alive and healthy. Actors rely on theatre voice specialists to understand the demands made on them in performance. Theatre voice practitioners must work with the whole voice. The goal of the actor and voice practitioner must be total communication.

On the other hand, speech pathologists, scientists and medical practitioners are taught a medico-scientific approach to understanding voice and would not be expected to have experience of the theatre voice approach. A separation of disciplines is the general finding in most parts of the world.

This study focuses on how speech pathologists might apply the experience of spoken voice techniques such as those used in the theatre in clinical practice. The experiential nature of theatre voice training is pivotal to the thesis. Voice work for an actor is dependent on sensory awareness and the experience of the voice inside the body as a tool for communication. The aim of this thesis is to explore how speech pathologists might integrate this personal experience of voice

to enhance their conceptual approaches and clinical skills in speech pathology.

It investigates an interdisciplinary approach to voice, which is a current trend in voice specialisation. Its results and conclusions aim to provide information about the outcomes of integrating two approaches to voice, spoken voice for the actor and voice specialisation in speech pathology.

This research does not attempt to provide a training structure for speech pathologists specialising in voice. It aims to expose voice specialists in speech pathology to an experiential approach to voice that encompasses the whole voice and explores the implications of this approach into clinical practice. For the purposes of this study, the training of the spoken voice will refer to the training of the voice as the actor's means of communicating the intention of the text.

CHAPTER 1 - LITERATURE REVIEW

THE VOICE SPECIALITIES

The study and training of the human voice has evolved a number of voice practitioner roles. These roles vary in treatment from diagnosis of a vocal pathology through to the development of the aesthetic qualities of the voice. The practitioner roles that involve the treatment of a vocal disorder include medical specialists such as ENT (Ear, Nose and Throat) surgeons as well as laryngologists and phoniaticians who specialise solely in voice. The ENT surgeon offers medical diagnosis and treatment. In Europe, there are both ENT surgeons and phoniaticists, the latter being medical specialists concerned with voice diagnosis and scientific measurement (Cornut, Bouchayer and Rugheimer, 1999). The voice practitioner that deals with voice care and remediation of disordered and healthy voices is the speech pathologist. They are called speech language pathologists in the USA and logopaedists in Europe. They offer remediation for the voice from a sub-normal level to normal voice. They also work in voice care, where clients may not have a vocal pathology, yet will require some kind of care due to misuse of the voice. Some speech pathologists have a special interest and specialise in voice.

The spoken or singing voice practitioner works to develop or craft the aesthetic and expressive qualities of the human voice. Their expertise is in working with clients/performers, who are required to use their voice as an expression of a writer or character's meaning. In order to express this meaning truthfully to an audience, the performer must make a connection to the broad range of human emotion and intellect. As these performers are often expressing an extraordinary range of emotion and thought, the development of the voice is an essential element of training. In effect, these practitioners deal with the voice at a "supra-normal" level, however, their approaches and techniques differ by nature of the desired outcome for the voice. A singing teacher must work with a voice within the constraints of the music, the style, the sustaining of sound and sometimes the breathing patterns written into the music. On the other hand, a teacher of the spoken voice works with a voice that must communicate a text by thoughts and emotions. It is the text and the actor's interpretation of that text which predominate. Berry (1973) considers that in singing the message is conveyed through the composition of sound, with the energy in the resonance of the sound. She suggests that the actor conveys his or her message through words and the energy of the message must lie in the use of the word.

Other professionals who work with voice include FM Alexander teachers (Alexander, 1932; Linklater, 1976); Feldenkrais teachers (Linklater, 1976), osteopaths (Rubin, Lieberman and Harris, 1999), physiotherapists, psychiatrists, psychologists (Janov, 1970) and gastroenterologists.

It is important to clarify the various roles of a spoken voice teacher. For the purposes of this study, reference to a spoken voice teacher will be defined as one who works with voice in the theatre. They will be referred to as theatre voice practitioners. Theatre voice practitioners work predominantly in theatre and acting institutions where the actor's voice is an essential element of their craft. British and American theatre traditions have led to the development of some famous theatre voice practitioners, Cicely Berry, Patsy Rodenburg, Arthur Lessac and Kristin Linklater (Berry, 1973; Rodenburg, 1992, 1993; Lessac, 1960; Linklater, 1976, 1992). Their philosophies are considered in detail in the following section (Theatre Voice Training and Techniques p.19). Commonly, theatre voice practitioners use their specific techniques in voice to allow the performer to communicate the intellectual and emotional life of a character or a text without being inhibited by their own habitual restrictions. Linklater (1976) describes the objective of working with the voice as "bringing a voice in direct

contact with emotional impulse, shaped by the intellect but not inhibited by it." (p.1)

Other teachers of spoken voice who will not be referred to throughout this thesis are those who work with accent and dialect (Colaianni, 1994; Herman and Herman, 1997). Also there are speech and drama teachers, whose approach to voice focuses on the elements of expression; such as projection, pace, pause, pitch, inflection etc as the purpose for study and in relative isolation from the intellectual or emotional intention of the author, performer or character (Krummel, 1946). Other spoken voice practitioners that will not be discussed in this study are those who work in the corporate arena, where spoken presentations and communication are vital to business. Examples of the application of this type of voice training are with stock brokers, teachers, ministers, lawyers, chief executive officers, aerobics instructors etc (Rubin, 1988; Verdolini, 1998; Merritt, 1999).

DEVELOPMENT OF VOICE SPECIALTIES

Speech language pathology developed in a number of countries in the early to middle part of the 20th century. In the USA, it evolved in the 1920's through the integration of psychology, speech, psychiatry, otolaryngology, paediatrics and child development, which focused a new field in the science of human communication (The University of Iowa, 1999). Later, in 1956, speech language pathology and audiology merged with liberal arts, expanding the discipline to areas of voice production.

Almost paralleling the USA, Australian speech pathology evolved a decade later. In 1931, Miss Elinor Wray, who had trained in the UK, assisted in founding speech pathology in Australia. Speech pathology established itself as part of medical sciences in Australia and readily a number of speech pathology clinics and associations were established (Eldridge, 1965). It is interesting to note that the first training programme for speech pathologists included a minimum of ninety lectures in normal voice and speech, where students focussed on their own voice for a period of training. Candidates were required to reach a high level of audibility, intelligibility, balance of tone, ease and lucidity of expression, poise and natural habits of speech. This preliminary course subject was studied alongside psychology, phonetics, the

nervous system, anatomy and physiology. The third and fourth years of training addressed voice disorders.

In the 1960's, prior to the establishment of the training of speech therapists at the University of Queensland, the Education Department there had been training some teachers as "speech correctionists". Speech therapists in Queensland, for a period, were employed through the Education Department and efforts were made to "resist the image of elocution teachers" (Speech Pathology Australia, 1999). Soon, Australian speech pathology became closely aligned with the schools of medical sciences at universities throughout Australia.

INTER-DISCIPLINARY TRENDS IN VOICE MANAGEMENT

Recently, integration of various voice disciplines has been an aim of several research groups such as the National Centre for Voice and Speech (NCVS) (National Centre for Voice and Speech, Accessed August 2000) and the National Voice Centre at the University of Sydney. Integration has also been the focus of the growing number of national associations of voice professionals such as the Australian Voice Association (AVA), the British Voice Association (BVA) (The British Voice Association, Accessed October 1998), the Canadian Voice Care Foundation, Voice and Speech Teachers Association

(VASTA) (Voice and Speech Teachers Association, Accessed May 1998) and the Voice Foundation (USA) (The Voice Foundation, Accessed May 1998). At many of the symposia and conferences held by these associations, the programmes are interdisciplinary in approach encouraging collaboration between specialists.

In 1992, the American Speech-Language-Hearing Association (ASHA) and the National Association of Teachers of Singing (NATS), also based in the USA, accepted a joint statement (Ad Hoc Committee, 1993). Its intention was to encourage their members to co-operate in the development and delivery of interdisciplinary programs and services for singers with voice disorders. Their decision to support an interdisciplinary approach came from an increasing awareness that singers with voice disorders searched for treatment of their disorder independently from their singing training. The joint statement recognises that the most effective path to vocal recovery was through an integrated approach to optimal voice care. Additionally, ASHA has established Special Interest Division 3, which deals with voice and voice disorders (American Speech and Hearing Association, Accessed June 2000). It is a division concerned with the interdisciplinary study of the human voice and aims to cover the entire spectrum of voice perception and production, from disordered through to superior performance. The attempt to cover this spectrum is aided

by their recognition of the various voice practitioner roles and people with special expertise in the area of voice, for example, speech-language pathologists, voice scientists, vocal coaches, studio teachers, and drama coaches.

The National Centre for Voice and Speech (NCVS) has also shown support for an interdisciplinary approach to voice and has developed a reference booklet for any practitioner who works with the voice: speech-language pathologists, singing teachers and theatre voice coaches. They collectively group these practitioners as “vocologists” (NCVS, 1994; Verdolini, 1998). The philosophy underlying this reference guide by the NCVS is to encourage clinicians to realise all of the beneficial approaches to voice management available to them. It presents a spectrum of voice techniques, which help foster an interdisciplinary awareness of the ways voice rehabilitation is approached from different traditions. This booklet acts as a reference for many speech pathologists working with voice. It lists eight techniques, which are regarded by many speech pathologists to be successful. These techniques include a number of speech pathology therapy techniques as well as four techniques employed by theatre voice practitioners. These are the techniques of Kristin Linklater, Cicely Berry, Arthur Lessac and F.M. Alexander.

The term “vocology”, which is the title of this reference booklet for voice practitioners demands definition. In 1990, Dr. Ingo Titze from the University of Iowa, who also established the NCVS, coined the term “Vocology” (Titze, 1990). Vocology supported the integration of voice art and voice science and is defined as voice care education, or “the science and practice of vocal habilitation” (Titze, 1992, 1996). Verdolini (1998) crystallises this definition in the latest publication of this guide as the entire study of the voice. A vocologist is also defined here as “any person who specialises in voice, including voice disorders and their management” (Verdolini, 1998, p.4). Vocologists include speech language pathologists, ear-nose-throat doctors, voice teachers, otolaryngologists and generally any voice educator. The aim of vocology as defined by Titze is to enable or assist the voice practitioner in performing whatever function is needed for any voice user. Vocal habilitation is not only about repairing a voice, which has been the traditional focus in voice science. However, it is described as the process of strengthening the voice to meet very specific and special demands as would be needed by actors, singers, lawyers, teachers, auctioneers etc. It is interesting to note that the term vocology is not used outside the University of Iowa. This could be because other institutions do not have this kind of training implemented in their curriculum. Or perhaps it is that the term is an

awkward definition for an area of voice that has not been thoroughly researched for its benefits to be of value.

In 1992, Titze proposed a training curriculum in vocology that was to be established as part of the speech language pathology graduate training in the United States of America (Titze, 1992). This curriculum has been successfully implemented as a specialty track of postgraduate study for speech language pathologists at the University of Iowa (The University of Iowa, 1999). As part of these graduates' clinical study, they receive training in the vocal arts and sciences where they train practically and theoretically in theatre and experience private voice coaching. They are trained to have the skills in both the reparation and in the training of voices. Vocology is also offered by the NCVS as a Summer Vocology Institute (SVI). The SVI mirrors the vocology track at the university. Courses are designed to provide an overview of vocal disciplines for students whose training has not necessarily been in speech language pathology. Some of the courses at the SVI are; Voice for the Actor, Seminars in Voice Disorders and Methods of Teaching Voice (singing).

There has been debate about Titze's curriculum, which addresses the potential problems associated with interdisciplinary training (Scherer et al, 1992). Part of this debate was that a vocology curriculum would

graduate voice generalists rather than specialists; that in training a voice specialist in a number of disciplines, the learning outcomes of this training would be less effective than the expertise gained in training in only one discipline. Titze's response to this suggestion is that the concept of vocology is one where professionals are exposed to a broader range of behavioural management in voice (Scherer et al, 1992). The concept of vocology suggests the sharing and awareness of approaches plus the understanding of the culture of the client and environment in which each voice discipline exists. It does not mean, for example, that a speech pathologist will learn how to become an actor or singer, but that they will explore approaches that are available for an actor or a singer in voice. They will also experience these approaches first hand to observe effective application to a broader clientele. Additionally, both courses that include vocology at the University of Iowa; the M.A. programme in speech language pathology and the Summer Vocology Institute (SVI), require that candidates have prior knowledge in one specific voice specialty. In the case of the SVI, they are required to have appropriate professional experience in their voice discipline. For this reason then, the voice specialists who come to train in vocology are those who have a solid prior knowledge in a specific field of voice. The importance of broadening awareness is essential if the evolution of an interdisciplinary approach to voice is to be successful.

The danger in a concept such as vocology, suggested by Sataloff (Scherer et al, 1992), is that these student specialists who are training as vocologists are learning about alternative voice disciplines, with the understanding that their learned expertise in these disciplines will allow them to integrate them into practice. Yet, the trainers of these students are not trained in the integration of disciplines, but are specialists in one voice discipline. Unfortunately, the proposed training of vocologists does not draw together the gap between the voice disciplines to ensure that integration in practice is effective. It provides an effective way of allowing voice specialists to become aware of alternative approaches to voice, however the integration of them is not addressed.

Despite the considerable literature on vocology (Titze, 1990, 1992, 1993, 1996, 1998; Verdolini, 1994a; Verdolini 1998), these papers do not appear to have investigated the effect of integrating the various vocal disciplines or the effects of training speech language pathologists in voice habilitation and enhancement. Verdolini (1994b) offers some useful research about the acquisition of skills during voice training, which aid in understanding the integration process between disciplines (Section: Skills and Approaches). There has been only one research paper, which attempts to address the integration of voice disciplines. DeBoer and Shealy (1995) determine whether singing

voice lessons could improve the clinical and perceptual skills of two groups of ten speech pathology graduate students. The design of the DeBoer and Shealy study accounts for differences in approach to voice. By integrating two voice disciplines, a study of this kind must satisfy the measurable elements of science in order to prove change, but also account for the intangible and kinaesthetic experiences of the subject, which are heavily relied upon in singing and speaking voice approaches.

In order to promote change in the perceptual skills of the subjects, the authors provided the subjects with private singing voice lessons. A special singing curriculum was not created for training these speech pathology students in an effort to create a realistic environment for learning. This decision reveals the authors' awareness of the differences in training approaches and environments between speech pathology and voice training in singing, as suggested by Verdolini (1994a). The singing training included the following skills and techniques. Posture and breathing techniques were addressed in context with relaxation and tension. Articulation, vowel acoustics, legato line and song interpretation were covered. Each lesson began with a voice warm up designed to stretch the voice and sharpen perception.

In order to perceive change in the perceptual skills of the subjects as a result of the singing lessons, the speech pathologists were required to take three quantitative tests over three test periods, before, during and after the singing training. Additionally, as a qualitative measure, they were each asked to keep a journal of their experiences in the voice lessons. The first quantitative test was a pitch perception test designed specifically for this study. The students were required to determine the average pitch of a set of recorded speaking voices, a practice similar to one used to measure habitual pitch. The election of this test was to determine whether singing voice lessons had an effect on the ability to distinguish pitch in voice with the aim of fine-tuning hearing acuity. The result was that average pitch discrimination of the students was sharpened.

The second test was the Towne-Heuer Reading Passage (THRP), which is a text describing vacation travel in Europe. It is used as a measure of the rate of glottal attack during reading as it has 100 possible juncture vowel occurrences. R.J. Heuer, whose personal communication with the authors in 1992, (De Boer and Shealy, 1995) suggests that if the incidence rate of glottal attack within the passage is greater than 40 – 60% then that is potentially indicative of vocal nodules. The results of this test were that the incident rate of glottal attack in the subjects reduced marginally as a result of the singing

training. Although there was a marginal result, this test aimed to support the use of singing voice lessons in training an awareness of glottal attack.

The third test was the S/Z ratio test. The ratio of /s/ to /z/ is used as a measure for laryngeal dysfunction (Eckel and Boone, 1981). The authors found that the ratios for /s/ to /z/ were questionable as a measure of pathology as a number of the students whose ratios were indicative of pathology clearly had none, however their primary interest in the test was in sustained phonation times and breath capacity. Although they were aware that this comparison would be a “crude assessment of increased breath capacity” (De Boer and Shealy, 1995, p.123), there were also many variables that would have affected a truthful result. The degree of loudness over the three intervals could not be set, lung volume following inhalation was not measured and subject positioning altered. The results for this test suggest that the average sustain times for these students after the training for /s/ and /z/ were higher than the average maximum vowel phonation times for men and women. However, the number of variables in the test procedure suggests that this test is not a reliable measure of the effect of singing voice lessons on breath capacity or sustained phonation.

Finally, subjects were required to record their experiences of the singing training in a journal. This decision to include personal observations is indicative of the authors' understanding of the value of personal reflection and evaluation when dealing with voice. The opportunity to reflect about one's own voice and the changes that occur is revealing and valuable. The student journals that were maintained throughout the training, allowed them to make comment on their observations of how they might carry over singing techniques and approaches to voice into their clinical practice. In giving them the opportunity to experience voice for themselves, they were allowed to experience techniques such as practising lower breath support for the first time. For some, this was a new experience, re-routing it from the academic and intellectual to a deeper physical experience. Some subjects made comment on the value of this physical experience of voice. A few realised that they were shallow breathers. The experience of the shift from shallow breathing to deeper breath techniques highlighted the need for modelling good technique in clinical practice bringing an awareness of the sensations that their clients might be feeling during clinical sessions. It seems that the value of the journals had a direct effect on perception of voice and approach to voice, which in turn affected their clinical practice. The comments that were made in the student journals pertained to deep physical shifts in voice. The journals offered the students time to

reflect and comment on their own experiences. This subjectivity exposes results of the effect of singing voice lessons that a selection of qualitative tests cannot measure or might not reveal.

The conclusion drawn by the study is that there is a strong indication of potentially significant carry over from experience from the voice studio to the speech clinic. In order for a study of this kind to be significant and measurable, it is clear that a number of quantitative measures must be involved. Of course, the voice cannot only be measured according to three tests as used in the quantitative section of this study, however measurability is essential. Although the results of these three tests suggest perceptual improvement in pitch awareness, vocal onset and breath capacity, it is unclear as to why these tests were chosen as representative of a measure of perceptual shift.

The strength of this study lies in the inclusion of the journal observations of the subjects as part of the measure of effect of the singing lessons. It is from these journals that the students were most clear about their experiences and explained directly how they had been able to integrate the effects of the singing lessons into their clinical practice. In a more global context though, this study is the first that attempts to explore and bridge the gap between two vocal

disciplines. It integrates singing voice lessons and speech pathology by studying how these lessons have affected clinical practice and perception of voice. It is interesting that this singular study looks at only singing and speech pathology disciplines.

There have been some practitioners of both spoken voice and speech pathology who have theorised over the value of integrating these two disciplines (Rubin, 1988). There has been no research on how this integration between speech pathology and spoken voice might occur, however, Rubin (1988) discusses how she has incorporated scientific research about the mechanics and functioning of the voice into her own practice with normal voice users. Her approach with “normal” voice users is not scientific, so she has had to interpret and translate selected scientific research to make sense of it for her clients and in her approach. For example, she has taken the findings of scientific research on voice, which relates to vocal stress in loud and/or long phonation and integrated it with her training of the spoken voice. She applied the outcomes of this research to her clientele whose likelihood of loud or sustained periods of phonation may cause vocal distress. With these groups, e.g., actors, pit traders, she has re-evaluated her methods of training to include some of the findings of research presented at The Fourteenth Voice Symposium; Care of the Professional Voice, run by The Voice Foundation in 1985. However,

Rubin does not explain how she has shifted her methods and techniques in spoken voice in order to incorporate these scientific findings. In effect, we can learn little from the outcomes of her experiments in an area that currently lacks practical and measurable research.

VOICE TRAINING OPPORTUNITIES FOR SPEECH PATHOLOGISTS

Van Mersbergen, Ostrem and Titze (1999) surveyed graduate programmes of speech pathology in the USA, which were accredited by the American Speech-language Hearing Association (ASHA). Their aim was to examine the state of training in voice for speech pathologists throughout the USA. They surveyed 215 and 207 programmes in 1994 and 1999 respectively with the same questionnaire. It examined the intensity of voice training in voice production, voice disorders and clinical experience.

The results revealed that students received limited course work and clinical experience in voice disorders and voice production at both periods of the study. In 1994, 60% of programmes required 1-3 hours of academic course work in voice production. This amount reduced to

49% in 1999. Additionally, in 1999, one third of programmes did not require voice production course work at all. The practical experience that is referred to in the study is in clinical training hours for diagnosis of voice disorders. Nearly one third of the students at both periods of the study could graduate without any clinical voice experience. Van Mersbergen et al summarised that the requirements for academic knowledge and clinical experience of voice disorders and voice production were generally lacking and that, at both periods, many speech pathologists could graduate without any experience in either area.

Van Mersbergen et al (1999) draw pertinent conclusions about these results. They suggest that speech pathology has evolved as a health care discipline to one that now includes many subspecialty areas in addition to voice, for example language and fluency disorders. Their concern is that these programmes have “overflowed the limitations of a two year master’s programme where they cannot be expected to graduate new clinicians well versed in all areas” (p226). This conclusion supports the concerns raised by Harry Hollien and Robert Sataloff (Scherer et al, 1992) regarding generalists as discussed in *Inter-Disciplinary Trends In Voice Management (Literature Review)*. It is certainly one that needs consideration when addressing an interdisciplinary voice approach.

The results of the Van Mersbergen study are mirrored in Table 1a and 1b. These tables offer an overview of voice approaches in a number of training institutions for speech pathologists in Australia and overseas. This information aims to assess the amount of experiential training speech pathology students have in their own voices and represents the general state of speech pathology training in institutions Australia-wide and internationally. It does not attempt to map a complete overview of speech pathology training institutions world-wide. The selection of courses described in these tables is not exhaustive, nor representative of all courses in voice specialisation in speech pathology throughout the world. They are a selection of courses made known to the author that describe voice training at the current time of writing. It was not the intention to research a complete guide of voice training courses for speech pathologists, yet simply to select a sample that might shed light on the state of training internationally and in Australia in order that a context for this thesis might be described.

Most institutions include some kind of training in normal voice, however Table 1a and 1b distinguish between normal voice training and training in theatre voice techniques. An institution has been recorded as working on the normal voice if there is reference to a

student's experience of his or her own voice. An institution has been recorded as working with theatre voice techniques, which is innately through practical experience, if there has been mention made of a recognised theatre voice practitioner and/or method; Linklater, Berry, Lessac, Rodenberg and, by association, Alexander. For the graduate programmes that are represented in Table 1a and 1b, the number of hours dedicated to the training and/or development of a student's own voice is very small; between 0 – 3 hours within a 2 to 4 year degree. Few directly employ the techniques of theatre voice practitioners, even though these methods are renowned for their effective training of the normal voice.

There are a few international graduate speech pathology programmes that recognise the relevance of integrating spoken voice or singing voice techniques within their curriculum. The Karolinska Institutet (Karolinska Institutet, Accessed August 2000) integrates techniques of posture, breathing, relaxation and various voice exercises of increasing levels of difficulty. Students receive body-awareness training and learn about the interactions between voice and mind and between voice and body language. These approaches are typical of most spoken and singing approaches to voice, where the practitioners of these disciplines understand that the voice is reflective of and an expression of the state of the body and the mind (F.M. Alexander,

1932; Linklater, 1976; Berry, 1973). The Karolinska Institutet aims to provide their students with skills of expression that will allow them to be able to treat patients with voice disorders. The goal of this work on their own voice is for them to develop an awareness of the connections between voice and body-language, to develop insight on the relations between voice and personality and see how psychological factors affect voice function.

The conclusions that can be drawn from Tables 1a and 1b are that there is minimal training in speech pathology where a student has the opportunity to explore his/her own voice. Voice, as an elective, is a small component of an undergraduate programme. For this reason, it could be suggested that the training of the student's own voice is not considered to be valuable enough for inclusion in a curriculum that is already overflowing. However, it is vital to add that to date the worth of a student's experience in his or her voice has not sufficiently been researched for its value to be considered as an essential subject for graduation. Currently, the only formalised opportunity for speech pathologists to train in theatre voice techniques is at The University of Iowa. However, this training is limited to an elective course for postgraduates where the voice disciplines are offered as individual units of study. There are no other formal training courses approved by university boards for speech pathologists.

Table 1a: Various four year bachelor university courses available for speech pathology training within Australia outlining the presence of students' practical experiences in normal voice training within each course and whether theatre voice training is available.

University	Student Training in the Production of Normal Voice Quality	Student Training in Theatre Voice Techniques
Flinders University, South Australia ¹	No	No
Charles Sturt University, NSW ²	No	3 hours taught by Arts and Drama voice teacher
La Trobe University, Victoria ³	Analysis of students' own voices perceptually and acoustically	Ad hoc arrangements for individual students
Newcastle University, New South Wales ⁴	No	No
University of Sydney, NSW ⁵	No	No
University of Queensland ⁶	No	No
Curtin University, Western Australia ⁷	No	No

¹ Personal Communication; Alison Russell, www.flinders.edu.au

² Personal Communication; Lindy McAllister

³ Personal Communication; Jenni Oates

⁴ Personal Communication; Alison Ferguson

⁵ Personal Communication; Elise Baker

⁶ Personal Communication; Debbie Theodoros

⁷ Personal Communication; Kathryn Hird

Table 1b: Various university courses available for speech pathology training outside Australia outlining the presence of students' practical experiences in normal voice training within each course and whether theatre voice training is available.

University	Course length	Student Training in the Production of Normal Voice Quality	Student Training in Theatre Voice Techniques
Hong Kong University ⁸	2yrs	Students experience self perceptual evaluation, relaxation, breathing and resonance work (3 hours)	none
Karolinska Institutet, Stockholm ⁹	4yrs	Students experience techniques in posture, breathing, relaxation and voice exercises, to use voice technique in texts and spontaneous speech. Perceptual voice analysis. Body-awareness training. Public Speaking (3 weeks)	none
Indiana University ¹⁰	2yrs		Lessac and Linklater Voice Techniques (2.5 hours)
University of North Carolina ¹¹	2yrs		Linklater/ Alexander technique (2 hours)
University of Iowa ¹²	2yrs		Elective on Voice for the Actor with techniques by Berry and Linklater.
University of Iowa ¹³	2mths		Elective on Voice for the Actor with techniques by Berry and Linklater (1week)
Bowling Green State University ¹⁴	2yrs	Students' practical experience in voice and speech techniques. 1-3 hours	none
University College, London ¹⁵	2yrs	Exploring aspects of normal voice prod. and discuss professional voice users with voice problems. 6 hours; small group work with student voice teacher exploring own voice with experience in basic voice work.	none

⁸ Personal communication Edwin Yiu

⁹ Published Syllabus, Stockholm University, Karolinska Institutet

¹⁰ Published Syllabus sent via email as attachment

¹¹ www.unc.edu/~chooper

¹² www.uiowa.edu, Published Syllabus The University of Iowa

¹³ The Vocology Summer Institute, The University of Iowa

¹⁴ Personal communication Prof. Ronald A. Scherer

¹⁵ Personal communication Dr. Lesley Cavalli

SPOKEN VOICE AND VOICE IN SPEECH PATHOLOGY

Verdolini (1994a) describes the differences in approach between spoken voice and speech pathology. It is understood within the voice community that the individual voice disciplines interact differently, that their language, environments and outcomes are different. For example, Verdolini describes the differences in the working environments of theatre voice practitioners and speech pathologists and the quality of vocal expression dealt with by each specialist. It is also understood that theatre voice trainers work with a wide range of human emotions and vocal expressions, rendering their work exquisitely expressive and that speech pathologists, on the other hand, tend to address relatively normal voice and speech in controlled and quiet environments. This difference in working environments typifies some of the distinctions that are made between disciplines. The distinctions drawn here are based on generalisations and are unsupported by research, however they are ones that need to be made in order to make sense of the gap in communication between these voice disciplines.

One focus of this study is the different language modes that are used by spoken voice teachers and speech pathologists. Verdolini (1994a) suggests that the theatre voice trainers use an “intuitive” mode of language, which relies on non-conscious mental operations. Whereas, the speech pathologist will rely on a more “analytical” mode of communication, where there is a “slow, deliberate and rational assembly of individual thought elements” (p.165). It is unwise to presume that, categorically each discipline is bound to each of these modes of thinking without accessing the other, however, Verdolini (1994a) suggests that this difference may be the reason why effective integration of disciplines has been a challenge.

Verdolini (1994a) adds another unfounded, yet generally accepted difference between disciplines. This is that theatre voice trainers consider the voice as a whole system. The body, mind, breath and voice are integrated and affect one another. This holistic approach allows the theatre voice trainer to approach a voice intuitively rather than the predominantly analytical mode that is common to speech pathology. As a result this intuitive mode involves concise detection and response “to very subtle aspects of voice and speech production in preverbal, spontaneous ways, moment-to-moment” (p.167). She suggests that this intuitive mode incorporated into therapy would be more relevant to the learner and offer more powerful and

encompassing solutions. By comparison, she suggests that speech pathologists tend to work with component voice parts separately and “may never combine them into a cohesive whole” (p.166). It is again suggested that this difference may be the reason for lack of successful integration between these disciplines. These differences are certainly generalisations and are not supported by research. However, it is this very research that is needed to assist in understanding how to integrate these disciplines and to increase the awareness of approaches, as is the intention of the vocology curriculum at the University of Iowa. (The University of Iowa, Accessed September 2000) and many others.

Verdolini (1994b) and Andrews and Schmidt (1999) examine the acquisition of skills involved in voice training. Their studies clearly reveal the need for research into the integration of theatre voice approaches and voice in speech pathology. Andrews and Schmidt (1999) investigate the reliability of skills required in clinical situations by voice specialists and student speech pathologists in voice. A focus is that clinical effectiveness is dependent upon interpersonal and attitudinal characteristics of the clinician and not only their technical, procedural and knowledge-based qualities (Cornett and Chabon, 1988). Voice is highly individual. As voice is a response to thought and feeling, an individual's voice is as unique as each individual. Because

of this, voice practitioners must be sensitive to any dynamic relationship that occurs for the voice user. This dynamism, whether in a clinic or studio, will take many forms. For example, there must be an awareness of the dynamic interrelationship between client and clinician/coach. There will be a dynamic relationship between the client's concept of their own voice and what they experience during clinic. Dynamism will occur between the client's shifting experience of voice and how they integrate or learn it. As voice is so inherently part of the person, sensitivity to the individual is essential. A clinician/coach cannot just rely on the concrete categories that have been taught about voice. These categories need to be integrated with intuitive and perceptual monitors, which receive information about the dynamic nature of voice and the individual. Precise and insightful treatment and enhancement of the voice will inevitably ensue.

Andrews and Schmidt's research finds that novice observers in voice clinic tend to zone in on the concrete observations and categories of the client and seem less aware of the abstract and psychodynamic aspects of treatment. They point out that clinical educators need to intentionally create additional opportunities for the learning of psychosocial dimensions of treatment. Andrews and Schmidt conclude by suggesting that "Additional research is needed to help us understand ways to stimulate (novice speech pathology) students'

abilities to perceive and apply the critical behaviours inherent in effective voice treatment" (p.233). This conclusion supports the findings of DeBoer and Shealy (1995) where the effects of private voice lessons on the clinical and perceptual skills of speech pathologists had a positive effect on their ability to perceive vocal behaviours in practice.

Verdolini (1994b) offers valuable information about some methods of skill acquisition that will certainly stimulate an understanding of how this integrated intuitive and concrete approach might be achieved. Verdolini (1994b) looks at some psychological principles related to learning. The study focuses on the information processing system of implicit memory and discusses how its functioning will support outcomes in voice teaching such as those raised by Andrews and Schmidt (1999).

Essentially, this study compares the learning modes of "knowing how", governed by implicit memory, to "knowing that", governed by explicit and analytical knowledge and goes on to argue the value of the functioning of implicit memory for voice teaching. It outlines that implicit memory is memory without awareness, is governed by perceptual processes, requires attention for successful processing, is dependent on repetition and is context specific. In context, Verdolini

(1994b) combines these functions of implicit memory to the training of the voice. The author incorporates these principles into her own voice training. Here the study is reliant on the subject's processing of perceptual information and the sensory experience of voice and the repetition of these sensations in order for the subject to experience rather than cognate.

Voice is inherent to the individual, so the changes that will inevitably occur during voice training will be highly personal and individual. Approaching voice via the implicit memory offers a client/actor/singer a less-directive and more subject-oriented approach to their voice, providing them with a far more valuable and student-specific experience. Verdolini summarises this approach as "something to experience". This experiential approach to voice underpins theatre voice training.

THEATRE VOICE TRAINING AND TECHNIQUES

Theatre voice training is about enhancing the normal voice to express and communicate subtleties of emotion and thought in the most truthful way possible (Linklater, 1976; Verdolini, 1994a). The performer has the character and the writer's intentions to communicate and must be concerned with honouring these truthfully. If their own idiosyncrasies interfere with the truth of what they have to express, then their ability to convey the intention or voice of the writer or character must be seriously questioned. If voice is the vehicle for expressing an internal process outward (Jones, 1996), then the most effective, efficient and only way to teach voice is for the trainer to allow the voice students to experience their own voice for themselves. The trainer complementarily facilitates any change in voice use that might allow the performer to express or communicate more truthfully. The trainer cannot feel these changes for the student and cannot express them.

Four theatre voice traditions will be discussed. These are Kristin Linklater, Cicely Berry, Patsy Rodenburg, and Arthur Lessac. These four theatre voice practices have dominated theatre training throughout the world and are regarded as recommended theatre training techniques for speech pathologists (National Centre for Voice

and Speech, 1994). Isobel Kirk's method will also be discussed in context with these voice traditions. Kirk's work is the basis for the study in Chapter 3. Kirk is a Master Linklater teacher and has an international reputation as a voice teacher in communication and performance. Her method is dominated by the Linklater voice methodology. It is also interwoven with her experience with Cicely Berry, Jo Estill, Tina Paker, Doreen Warburton, Doreen Hogan and many other voice and acting teachers over the past thirty five years. As discussed below, Kirk has many similarities in approach and technique to the four voice traditions that are recommended by the NCVS (1994).

The tradition of theatre voice teaching is dependent on two factors, teaching style and technique. Although teaching style is highly personal and reveals subtle variation between teachers, the basic elements to teaching style are similar amongst these theatre voice practitioners. These will be discussed first. The strongest difference between them is technique. Their techniques will be described separately.

Common Teaching Style and Approach to Voice

The experiential approach to learning, which in turn affects teaching style, is the common element that links these theatre voice practitioners. The theatre voice trainer relies on a 'hands-on' approach to teaching, facilitating an experience of voice that is a physical, sensory and psychological one. The teaching style of all these practitioners is dependent on perceptual skills, is student based rather than teacher directed and integrates the psychosocial self with the voice. Students are most often guided through the work by a teacher rather than being 'taught at' or given a "how to" approach as Verdolini's discussion on skill acquisition (1994b) supports. This, in effect, provides a holistic teaching approach. Kirk (Jones, 1996) is very aware of allowing students to discover and experience their voice for themselves, avoiding prescriptive measures or a "how to" approach. The premise behind this approach is that there is greater value invested in a discovery made from a personal need than an imposed one. Berry (1973) and Linklater (1976) both have designed exercises that free the actor's voice rather than making them technically proficient (Berry, 1973). Within their structure of exercises, the creativity and exploration of one's own voice can be most effective.

An approach that is common to all five practitioners is to help the student understand that muscular tension restricts the voice. The student must then acknowledge that a constricted voice will sabotage their total creative communication. These tensions restrict the freedom of the voice so that it becomes limited in its truth of expression. Linklater (1976) and Kirk (Jones, 1996) approach students from the assumption and mutual agreement that a voice is capable of expressing the full range of human emotion and all the nuances of thought. The work then is in bringing the student to an awareness of all the survival blocks, obstacles and tensions that are placed in the way of the natural voice. These blocks can dull the senses and restrict muscles. In effect, they block the impulses for communication that occur between the subtle stimuli from the brain and the body's intricate web of muscles. Linklater (1976) describes these blocks as physical, emotional, intellectual, aural and spiritual. Her work is in freeing these blocks, yet keeping the connection between the voice, the body and the psychology. When a student begins work on their voice they are often unaware of physical and vocal blocks and the link between the two. Kirk (Jones, 1996) describes her approach to removing vocal blocks as initially bringing them into the student's consciousness, where they can be dealt with. Physical blocks are habits, which by definition means that we have no control over them. By activating a conscious awareness of unconscious habit, the

student is able to make choices and gain some control. They are then able to take responsibility for the degrees of physical and vocal freedom they require. Her first step in voice work is to methodologically undo restrictive muscle tensions and emotional/psychological inhibitions. Linklater and Kirk describe the human voice as having a potential range of three to four octaves at birth (Jones, 1996; Linklater, 1976). However, this range becomes inhibited as we grow older, due to physical blocks and social etiquette, to the point where the expression of emotion and thought is limited to a few notes. Theatre voice trainers develop ways to aid a student to re-access this range allowing them greater choice for expression. Lessac (1960) also focuses on developing an awareness of the numbing habits, which limit the voice. He works with students to 'actively' relax these habits through habitual awareness. Rodenburg (1992) discusses her approach to voice training by initially addressing the restrictive habits, which reduce the potential of the voice. Rodenburg believes that we have a right to speak, be heard and express ourselves wholeheartedly. The ability to exercise this right is compromised when we surrender to numbing habits, which gag and restrict our voice.

After the students understand the importance of releasing muscle tensions and have become aware of where these tensions are for

each of them, the next step is to release these tensions. A body without unnecessary and inhibiting muscular control is more likely to express emotion and thoughts in performance. Linklater and Kirk adopt a specific vocabulary in their teaching approaches. To complement the philosophy of releasing, allowing and letting go, Kirk uses passive rather than active vocabulary. The approach to the student's voice is through suggestion and encouragement, where active messages to the body, such as, take a breath in/out, inhale, exhale, are avoided. Passive messages such as, let the breath drop in, allow the breath to release encourage habits to shift. As a way of reprogramming breathing so it does not rely on control, this encourages natural rather than habitual breath. After identifying and releasing the muscles that inhibit breath, the next step is to add sound. As a result, voice is released naturally rather than restricted habitually. Berry's approach to voice begins with relaxation, which deals with releasing controls. Rodenburg (1992) describes the exercises that many trained actors and singers undergo at the beginning of a warm-up as "floor work" (p.173). She describes its benefits as immediate, where the body can release from its habitual holds as it surrenders to gravity. As a result, the natural rhythm of breath can be accessed without the interference of habitual muscle tensions.

For all these practitioners, there is an awareness of the entire human being involved in voice. "To free the voice is to free the person, and each person is indivisibly mind and body" (Linklater, 1976, p.2). Voice is dependent upon the voice, body and mind connection. Linklater (1976) writes that; "Perfect communication for the actor implies a balanced quartet of intellect and emotion, body and voice – a quartet in which no one instrument compensates with its strength for the weakness of another" (p.1). Lessac (1960) supports this approach. His philosophy is that everything in voice is integrated, that voice, speech, and body are connected as are any of the modalities through which we perceive, feel, emote, or create a physical expression. Rodenburg (1992) and Berry (1973) have developed a series of exercises that explore the entire body while working with the voice. Kirk works from the understanding that successful communication is a result of the simultaneous interaction of thought, emotion, vibration/speech and breath (Jones, 1996). Her philosophical approach is as follows; that she is a facilitator for actors to explore their own voice in a way that will achieve change effortlessly. She finds that long-term change is accomplished when the exercises for releasing muscle tension are experienced through pleasure rather than effort.

The Techniques

Patsy Rodenburg (1992) eloquently describes the connotations of the word 'technique' within the context of voice over the past fifty years. She suggests that technique was once seen as binding and inhibiting to the personality of the performer's individuality and creativity, where a robotic repetition of exercises disconnected us from ourselves. There was the belief that voice teachers were prescriptive in their approach and gave line readings or their interpretation of the text. In the late 1950's, there was a swing in attitude about technique, where voice practitioners moved away from the rigidity of the rote learning of technique (Rodenburg, 1992). Voice was approached by a more subtle technique with an awareness of working from the inner emotions and intellect of the performer, where changing the self was an essential factor. These four practitioners (Linklater, Berry, Rodenburg and Kirk) work with the awareness that techniques cannot be disconnected from the heart and the mind. In essence, they approach voice holistically.

Kristin Linklater's (1976, 1992) technique of freeing the natural voice developed from the work of Iris Warren, an English voice teacher. This work was not recorded in written form but passed to Linklater orally. Warren's studies in the link between the human being and the

functioning of the human voice resulted in a technique that allowed her students (actors) to have the ability to speak with deep emotion, simply and from the heart. Linklater, being a student of Warren's, later interpreted Warren's system adding to it from her own experience. Any reference from this point to the logical progression of exercises as adopted and interpreted by Linklater will presume their origin from Iris Warren. The premise behind the Linklater technique is that the natural voice is freed from habitual tensions and blocks leaving the voice transparent and responsive. Linklater's development of Warren's concise and logical progression provides spoken voice students with a set of exercises that gradually increase in energy. The progression begins with physical awareness by finding the difference between tension and relaxation, with a focus on the spine. The next area of attention is the source of sound, beginning with the natural breath, which is the blueprint for sound and moving onto vibration with a touch of sound, which is then gathered, released and multiplied. The muscles, which might inhibit the free release of sound, are explored with the intention of allowing the solid core of vibration to release over them. These muscles are the lips, jaw, tongue and soft palate among others. The resonators of the body; the chest, mouth, teeth, sinus, nose and head then multiply these free vibrations and lastly the articulators chop up the vibration into speech. Linklater (1992) focuses

on sound and then word as a result of an inner need to express a thought or emotional impulse.

Linklater accesses her student's creative intelligence by approaching the exercises through imagery, impulse and emotion. In effect, she hands over the responsibility of learning to her students, allowing them to experience the work from their own perspective. Additionally, her language is very specific. She approaches the work with a very deliberate vocabulary of allowing and exploring, rather than with a dictatorial or directive approach. Although her approach is about opening up to possibility, it is highly pragmatic.

Kirk's technique is similar in progression to Linklater. The first step is to methodically undo restrictive muscle tensions and emotional/psychological inhibitions. She moves on to breath, then vibration, release and multiplication of vibration, focus on the muscles of the lips, jaw, tongue, soft palate, then resonance and finally articulation. Her use of imagery, impulse and emotion adds to the variety of choices her students discover. She encourages commitment to communication through five essential channels: physical, vocal (vibration/verbal), intellectual, breath and emotion where the goal of communication is to think, feel, breathe and speak simultaneously.

Berry (1973) has developed a technique that also shares fundamental similarities with Linklater. Berry also works from the premise of setting the voice free from blockages, which tend to iron out idiosyncrasy and personality. She works to liberate the hidden possibilities in the voice and the actor, bringing them back to the instinct of the moment, which allows for spontaneous and truthful communication of emotion and intention. Berry moves from relaxation and breath to muscularity and then focuses on the voice as a whole; that is the voice connected to intention and word. Fundamental to Berry's work is the understanding that words and sound are intrinsically linked and that words are a result of the physical need to express a situation. Berry focuses quite deliberately on the muscularity of words and the way they are formed. Incorporated throughout her entire method is the voice's connection to text. Linklater and Lessac use a progression of exercises. Linklater transfers all exercise onto text.

Arthur Lessac (1960) has taught voice for over fifty years and his approach combines his experience as a performer, singer and teacher as well as a voice and speech therapist. His work is primarily with performers and is one of the most reputed and successful integrated approaches to voice. Lessac's technique is circular and non-linear in progression. It is based on three "actions": structural action, tonal action and consonant action. In technical detail, he looks at the

structure of the vocal tract and the possible tensions associated here. Structural action refers to the lengthening of the vocal tract and the release of muscle tensions. Tonal action refers to the sensation of vibration and consonant action details the vibratory quality of each consonant leading into communication.

Patsy Rodenburg (1992, 1993), studied under Cicely Berry. Her vocal approach is a series of exercises that are based on the restrictive habits that limit the right to speak. Her technique moves from the outside in, from the physical to the internal emotional and intellectual parts of us that affect the voice. This is not dissimilar to Linklater's technique. Rodenburg condones technique as a series of repetitive exercises, which disconnect us from the very thing they are hoping to achieve; that is release rather than rigidity. Rodenburg moves through a series of physical exercises supporting them with theory about their connection to voice. She begins with relaxation on the floor and then to an upright position, relaxing through the head, throat, neck, shoulders, upper chest, face, spine, abdomen, knees and feet. Re-centring the body at this point is essential through which she then addresses the jaw, the tongue and the soft palate. Finally, the breath is addressed then support and strengthening exercises. Rodenburg's technique differs slightly from Linklater's. For Linklater, breath is incorporated throughout her progression as she sees it as a complex

process, which exists at the basis of each exercise. Linklater also specifically addresses the upper registers of the voice, such as the sinus and nose in detail, whereas Rodenburg addresses them through brief resonance and vowel work.

Rodenburg (1993) reinforces her vocal technique with its integration into text, which is not dissimilar to Berry's (1973) approach to voice, where the need for words is intrinsic to our right to speak. Linklater (1992) also developed her technique based on the freeing of language and sound through the intrinsic nature of sound in the body. Although Rodenburg (1993) does specify some exercises for exploring the need for words in speaking text, as does Berry, Linklater and Warren have designed a progressive series of exercises that follow the evolution of sound into word into language. Linklater's logical and pragmatic approach to language methodically integrates vocal technique into text. This allows the student to own or access the knowledge via a logical progression of exercises, more readily than Berry and Rodenburg's approaches, which rely explicitly on the creative imagination of the teacher and student together rather than the student alone.

F. Matthias Alexander's method has become a reliable source of mind-body re-education upon which many theatre voice trainers rely

(Alexander, 1932). His method looks most specifically at body awareness. Additionally, Moshe Feldenkrais's body awareness technique (Feldenkrais, 1972), which is arguably a more functional in approach is also popular. This voice/body connection is common thread to most theatre voice practices, so their focus on physical awareness is essential. Alexander's technique (Alexander, 1932; Goldberg, 1996; NASTAT, Inc., 1988; The Professional Association of Alexander Teachers, Accessed May 1998) came about from a need to find an answer to his own vocal problem when reciting text professionally. He found that he would lose his voice when required to recite aloud for an audience. No professional at the time could help him, so he began his own explorations. He concluded that his trouble was due to something that he was doing physically. He found that he had to initially deal with the habits that he had developed that restricted him physically and vocally. Through experimentation, he became aware that with the change or reshaping of one part of the body there tended to be an adverse effect on the shape and functioning of other areas of the torso. His approach became a technique of mind-body re-education and was based on efficiency and natural functioning. He proposed that if a physical activity were based on inefficient co-ordination or 'misuse' then our quick response mechanism, which turns a conscious act into a sub-conscious act, would result in an habitual misuse of ourselves. His point was to break

the cycle of misuse or habit to allow more achievable possibilities. This premise is similar to Rodenburg's, Berry's, Linklater's and Lessac's and their training of the voice. The link here with theatre voice training is evident. The Alexander technique offers the opportunity to open-up to all the possibilities and choices available to performers and to connect to the intrinsic link between the body, the voice and the mind.

CHAPTER 2 - AIM

THE TWO VOICE DISCIPLINES - SOME DIFFERENCES

This study will show how possible shifts in the concept of voice might influence speech pathologists' entire approach to voice and how this would impact their clinical practice. This study researches voice specialisation via the integration of two antithetical, yet complementary voice disciplines: spoken voice training for the theatre practitioner and voice specialisation in speech pathology. It explores the conceptual and clinical shifts that must inevitably occur when these two disciplines are brought together. If these shifts are to be explored, some differences between the disciplines must first be addressed.

It is important to keep in mind that current approaches in voice specialisation are created, influenced and reinforced by both training system and work environment. Therefore, to consider an integrated approach would mean re-addressing these systems. The aim of this research is not to suggest ways that these systems can be reassessed. It could be recommended to future researchers to study how these changes in approach and in clinical practice might shift a speech pathology training system and work environment.

A difference that warrants attention is the approach taken by the clinician/teacher with a client/student and the quality of relationship that is established between them. Although speech pathology can not categorically be termed medical, the clinical approach to clients in speech pathology mirrors a medical approach. The client and the voice specialist in speech pathology relate in a patient/doctor relationship. The speech pathologist is the source of knowledge and the patient comes with the expectation of being diagnosed. By comparison, the voice teacher/student relationship of the theatre voice specialist is one where the actors come to explore their voice and discover its potential for themselves. The voice teacher facilitates these discoveries. Essentially, the difference here is that in the former, the speech pathologist owns the knowledge and in the latter the actor owns the knowledge.

The categorisation of voice quality is also a major difference between the disciplines. Generally, voice specialists in speech pathology treat disordered or sub-normal voices and theatre voice practitioners enhance a normal voice to supra-normal. As a result, their methods and desired outcomes for voice vary significantly. The physical environments in which training/remediation takes place reflect the difference between these two disciplines in terms of approach and methodology towards voice. A studio/theatre space for a theatre voice

coach is ideal for encouraging play and exploration for the voice. A private/public clinic for the speech pathologist denotes a more prescriptive approach to diagnosis. Both these environments frame a client/patient/actor/student's expectations of the training or remediation session. These differences are not exhaustive, but are fundamental between these two disciplines. It is important that these differences are taken into account if communication between them is to be successful.

HYPOTHESIS

Despite a growing interest in an interdisciplinary approach to voice, there has been little to no research that supports the affects of integrating spoken voice training and speech pathology. This research aims to explore the affect of spoken voice training techniques as used in the theatre on speech pathologists and how this might effect their concept of voice and clinical practice. The study is based on the hypothesis:

That spoken voice techniques as used in theatre voice training would have an effect on a speech pathologist's concept of voice and clinical practice.

CHAPTER 3 - METHOD

Isobel Kirk's training of a group of speech pathologists was the basis of this study. This methodology is described in Chapter 1: Theatre Voice Training and Techniques. Her intentions for this training were to offer the participating speech pathologists an opportunity to celebrate and free their voices. She aimed to facilitate this experience by offering practical exercises with experiential learning from a theatre voice perspective. The intention of this kind of training was that these speech pathologists, whose training lacked an experiential approach to voice, observe and experience an alternative approach to voice that does not supplement, but compliments their established knowledge of voice.

THE SUBJECTS

This study was developed in conjunction with a private course for speech pathologists in theatre voice techniques, which was taught by Isobel Kirk in November 1998. Six female practising speech pathologists (from here on known as subjects) enrolled in the course and all agreed to participate in the study. The University of Sydney's Ethics Committee approved the project in 1998.

THE TRAINING STRUCTURE

The training was devised as a weekend workshop (called basic training from here on) and a subsequent, more intensive program over 4 months, which 2 of the 6 subjects elected to pursue. While the numbers are small for thorough investigation of the two different levels of training, these data were considered valuable in discovering the effect of this training.

Basic Training

All subjects took part in the basic training, where 4 of these 6 subjects took this training only and 2 of these 6 subjects took further training as discussed below in Intensive Training. The 4 subjects who took the basic training only are called the basic trainees. This level of training involved one intensive weekend of theatre voice techniques with Isobel Kirk. This single weekend course ran for a total of 12 hours. This weekend workshop was an opportunity for the subjects to explore their own voices. The emphasis was on experiential learning through self-observation, analysis and discussion. The subjects were taken through the Linklater progression, beginning with physical release and moving through to resonance and articulation. They were required to learn a piece of text to use in combination with the voice techniques and finally perform their chosen text.

AREAS COVERED IN THE BASIC TRAINING

The subjects experienced the first half of the Linklater progression (See Chapter 1, Theatre Voice Training and Techniques). This work was also integrated with Kirk's knowledge and experience of voice and performance. The first day involved the subjects experiencing the sensation of performance and the relationship between the actor and audience by performing a piece of poetry. This was used as a base to follow Linklater's logical progression, beginning with physical awareness and finding the difference between tension and relaxation. The subjects then focussed on the spine and its alignment (the spine roll). This physical focus was used to assist in exploring breath and then the source of sound – the belly. By touching on vibration, subjects then gathered, released and multiplied these vibrations to experience voice as a product of their thoughts, emotion and body. On day two, the muscles, which might inhibit the free flow of vibration (as found on day one), were explored. These muscles were the lips, jaw, tongue and soft palate. The vibrations were then amplified in the channel resonators: the chest, mouth and teeth.

At the end of each day, the subjects were invited to perform their learnt piece of Shakespearean text integrating it with what they had discovered about their own voice for that day.

Intensive Training

The additional intensive training was taken by 2 subjects. They are called the intensive trainees. This additional training involved:

- Participation as a student in a 10 week course for actors in Kirk's theatre voice technique. This was for 3 hours per week, in addition there was 1 hour debrief of the class without the actors present.
- An intensive "live away" weekend, designed specifically for this intensive training group, focusing solely on their own voices and the theatre voice techniques covered in the ten-week course for actors. This weekend was a total of 35 hours over 3.5 days.

This intensive training programme was an extension of the basic training, where the subjects were able to focus more closely on the techniques, their experience and their interpretation of them. It was a chance for them to examine their own voice and look deeply at the inner workings of the connection between their voice and their expression of it. In addition to the areas covered above in the basic training, the following areas were covered;

- Revision of days 1 and 2 (as for the basic training).
- Additional techniques based on the Linklater Voice Method including;
 - The resonators - chest, mouth, teeth
 - Power breathing
 - Sinus
 - Nose
 - Head
 - Articulation
- Deeper exploration of text and language integrated with the voice progression. For example: Haiku poetry
- Highly individual attention to personal tensions and vocal patterns in order to experience freer voice.
- Intensive observation of actors experiencing the voice progression. This unit of observation included debriefing sessions for the intensive group, allowing for discussion on teaching methods and a greater understanding of this vocal approach.

DATA SELECTION AND METHODS OF ANALYSIS

Subjects were asked to fill out a questionnaire (Appendices A and B) pre-training, 1 week and 4 months after the initial basic training, which for 2 of the 6 subjects followed an intensive period of training and for the other 4, followed a period of no contact. The questionnaire was structured in 3 sections; personal, perception and approach and asked the same questions over the 3 periods. The pre-training questionnaire additionally asked some general questions concerning the demographic information of the subjects and previous training. Accompanying the questionnaires at 1 week and 4 months was a semi-structured interview with each subject, conducted by the author. This interview (Appendix C) was a series of set questions giving the subjects the opportunity to comment subjectively on how the theatre voice training may have shifted their personal perception of voice or their clinical practice.

The design of the questionnaire and interview was based on Isobel Kirk's practitioner's notes from her private theatre voice training of two speech pathologists throughout 1998 when two major categories of change (concept of voice and clinical practice and approach) were observed.

Concept of Voice

Self Perceived Concept of Voice

GENERAL CONCEPT OF VOICE

Data concerning the subjects' general perception of voice and their understanding of the value of voice training was gathered from 7 questions in the questionnaire (Appendix B, 2.2–2.9). These questions were asked at each interval of the training; pre-training, 1 week after the training and 4 months after the training. Question 2.2 looked at the subjects' definition of voice over the 3 periods of the study. Question 2.3 - 2.5 were an extension of question 2.2. Question 2.6 – 2.9 determined the subjects' understanding of the value of voice training for both performers and speech pathologists.

SHIFT IN VOICE

The questions in this section (Appendix C, 1-6) addressed different areas of voice that are characteristically part of a theatre voice training approach. They are related to each subject's perception of a shift in their own voice as a result of the training. The parameters which described concept of voice were, shift in voice, physical shift, shift in breath, shift in use of language, shift in inner voice (internal dialogue and thoughts) and sensory shift. The subjects were also asked to comment on how these shifts affected them personally and how they may have specifically applied them into their clinical practice.

CONCEPTUAL AWARENESS OF VOICE

From the semi-structured interview (Appendix C, 7) subjects were asked to point to where they perceived their voice to be in their body at each occasion: pre training, 1 week and 4 months (for 2 subjects the 4 month follow-up was after a further intensive period of training).

USE OF LANGUAGE

Question 4 in the semi-structured interview (Appendix C) referred to the subject's use of language when discussing voice personally or in clinical situations. This question aimed to determine whether the subjects had perceived a shift in their use of language about voice from active and directorial language to more passive language. The effect of this difference in language use is discussed in Chapter 1: Common Teaching Style and Approach to Voice (p.47). Additionally, from the interview transcripts, the subjects' use of passive and active language was analysed. During the interviews, the subjects were not aware that their language was to be analysed for the actual frequency of passive and active language. The results are based on the following selection of active and passive words, which were discussed in the training and which might be used in clinical practice. These selected words were:

active	passive
hard/difficult	feel
try	allow
make	let
to take a breath	imagery
to breathe in/out	release
to concentrate on	ease
to work on/at	free
	fun

Measurement of Concept of Voice

CONCEPT OF VOICE BASED ON VAS RATINGS

All subjects were asked at each period of the training; pre-training, 1 week and 4 months to respond to 7 Visual Analog Scales (VAS) based on their concept of voice (Appendix B, 1.5). The 7 parameters used to measure concept of voice were based on how well;

1. your voice communicates your thoughts and ideas
2. your voice communicates your feelings
3. your voice serves you in social situations
4. your voice serves you in clinical practice
5. your voice serves you in situations of heightened emotion
6. do you listen to people
7. do others seem to listen to you

The subjects were asked to rate their perception of their voice on a VAS scale from poor to excellent.

Clinical Approaches

Self Perceived Clinical Approaches

GENERAL CLINICAL APPROACHES

Based on questions in the questionnaire (Appendix B, 3.2, 3.3) all subjects made comment on their use of equipment in clinic and theoretical approaches over the 3 training periods.

PERCEIVED VALUE OF PERCEPTUAL ANALYSIS

A question in the semi-structured interview asked subjects; "What value do you place on perceptual analysis?" (Appendix B, 3.4). At each period of the study, subjects were required to place a mark on a VAS scale to indicate whether they thought the value of perceptual analysis was limited or extensive.

TREATMENT OF LARYNGEAL CONSTRICTION

Subjects were asked to comment on their treatment of laryngeal constriction at each period of the training (Appendix B, 3.5) in order to see whether their approach changed as a result of the training.

PRINCIPLES OF VOICE

Question 3.6 (Appendix A, 3.6) in the semi-structured interview asked subjects, at the 3 periods of the study, to describe which principles of voice, if any, would you apply to the following disorder groups:

- a) Articulation
- b) Phonological processes
- c) Aphasia
- d) Dysarthria
- e) Dyspraxia
- f) Stuttering
- g) Velopharyngeal insufficiency (vpi) not common

These disorder groups were selected as a result of discussions with a group of practicing speech pathologists. They represent a wide range of commonly treated voice disorders presented in clinic.

Measurement of Clinical Approaches

MANAGEMENT OF VOICE CLIENTS

The subjects were asked to rate their perception of how their management of a voice client had shifted as a result of the training at 1 week and at 4 months. There were 7 selected parameters used to measure this shift at these 2 intervals. These parameters asked the subjects to rate a shift in their awareness of their physical presence, psychological approaches, sensory awareness, understanding of breath, choice of words and quality of voice.

CHAPTER 4 - RESULTS

CONCEPT OF VOICE

Self Perceived Concept of Voice

The semi-structured interview and questionnaire were used to ascertain whether the subjects perceived and rated a shift in their own voice or a shift in their concept of voice as a result of the training.

Biographical data

Table 2 shows the level of experience, area of specialisation and postgraduate training for each subject. All subjects trained in speech pathology at the University of Sydney. Only one subject (subject 4) had undertaken any additional training at an undergraduate level. This was a theatre voice weekend training with Isobel Kirk at the National Institute of Dramatic Art (NIDA), 6 years prior to this study.

Table 2: A summary of the background of the six subjects who underwent training.

subject no.	no. of years in practice	area of specialisation	average no. of voice clients per week	postgraduate training in voice
2	12.5	voice disorders, head and neck surgery, tracheotomy, neurogenic voice and swallowing disorders	20 or more	Voice Craft courses with Alison Bagnall and Jo Estill. Courses with Jan Baker
3	18.0	adult, child, corporate voice and speech	0-5	Voice Craft with Alison Bagnall and Jo Estill
4	5.0	head and neck surgery and voice	0-5	Voice Craft 6 day workshop
5	12.0	head and neck surgery	0-5	A number of voice courses
6	4.5	neurology, neurosurgery	0-5	Beginners drama courses, Working with Voice course
7	9.0	rehabilitation., brain injury, voice, speech	0-5	2 voice symposia

General Concept of Voice

All subjects were asked a number of questions in the questionnaire pertaining to their general perception of voice and the value of voice training. For all the basic trainees (i.e., the 4/6 subjects who attended the initial weekend training only), the definition of voice remained similar throughout the 3 periods of the study. These definitions of voice were described in terms of the larynx or the vocal cords or other

anatomical terms. One basic trainee used some intangible elements in her description at 1 week when she said; "Voice is essential for the communication of thought, language and emotion". The two intensive trainees' (ie the 2/6 subjects who underwent an intensive 4 month training period) definitions of voice shifted dramatically. At pre-training, both the intensive trainees used anatomical and clinical language to describe voice. Subject 3 described it as "sound which is formed and modified in the vocal tract and then the articulators are used to produce speech." At 1 week they both began to integrate emotion and breath into their definitions displaying an understanding of a more holistic concept of voice. Subject 4 commented that it was "a means to convey emotion/feelings. Can be used to manipulate/add character/life." By 4 months, both the intensive trainees' definitions simplified to "vibration on breath" (subject 3) "vibration on air" (subject 4). Subject 4 even commented in the questionnaire that she was aware that her definition had changed.

Questions 2.6 – 2.9 (Appendix B) asked the subjects to comment on the value of voice training for performers and for speech pathologists and then the value of integrating the two approaches. The responses do not show much variation over the 3 periods of the study. Commonly, each subject commented on how each training approach would assist in understanding the different language used for both.

Also that the differing perspectives allowed for a greater range of approaches; “An increase in repertoire of techniques” (subject 6). One subject commented that “some people will respond better to a different approach.” Overall, all subjects considered that there was value in combining theatre voice techniques and speech pathology in these respective fields.

Shift in Voice

The semi-structured interview included 6 questions relating to the subjects’ concept of voice and whether they perceived any shift personally or clinically as a result of the training. Table 3 describes the results to these questions. Positive changes were reported in 26 of 36 possible responses about parameters associated with concept of voice. Moreover, these appeared to be sustained for 4 months in most subjects. The total effect of the training for all parameters and for all the subjects shows that the training had an overall positive effect for the group. The parameter “inner voice” was excluded from results due to the fact that few subjects responded to this question.

Table 3: Analysis of the subject's responses to the semi-structured interview questions. The 6 subjects were asked to comment on perceived shifts in personal perception and clinical approach to voice as a result of the training based on the parameters. A "+" refers to a positive response, a "-" refers to a negative response and "no effect" refers to a subject saying they did not observe a shift in this parameter. The time intervals refer to 1 week following a 2 day basic training period (6/6 subjects) and a 4 month follow-up at which time 4/6 subjects had received no further training and 2/6 subjects had received additional training over the 4 month period (see Method).

parameters	1 week (6 subjects)	4 months (4 subjects – basic training only)	4 months (2 subjects additional intensive training)
voice quality	4/6 + 1/6 – 1/6 no effect	3/4 + 0/4 – 1/4 no effect	2/2 + 0/2 – 0/2 no effect
physical awareness	4/6 + 0/6 – 2/6 no effect	3/4 + 0/4 – 1/4 no effect	2/2 + 0/2 – 0/2 no effect
awareness of breath	6/6 + 0/6 – 0/6 no effect	3/4 + 0/4 – 1/4 no effect	1/2 + 0/2 – 1/2 no effect
language use	5/6 + 0/6 – 1/6 no effect	3/4 + 0/4 – 1/4 no effect	2/2 + 0/2 – 0/2 no effect
sensory awareness	3/6 + 0/6 – 3/6 no effect	2/4 + 0/4 – 2/4 no effect	1/2 + 0/2 – 1/2 no effect
specific applications of the above to clinical practice	4/6 + 0/6 – 2/6 no effect	4/4 + 0/4 – 0/4 no effect	2/2 + 0/2 – 0/2 no effect
total	26/36 + 1/36 – 9/36 no effect	18/24 + 0/24 – 6/24 no effect	10/12 + 0/12 – 2/12 no effect

It can be seen in this table that most of the subjects perceived a positive shift in all the parameters measured both at 1 week and at 4 months. Only 1 subject reported a negative effect of the training to her voice on one parameter at 1 week and 9 out of a possible 36 responses indicated nil effect of the training. After 4 months, 6 out of a possible 24 responses indicated nil effect for the 6 parameters from subjects who had received no additional training in the 4 months while 2 of a possible 12 responses were nil for the subjects who received intensive training.

One of the most interesting findings was that all 6 subjects recorded a positive application of the training into clinical practice after 4 months, where at 1 week, 2 of the subjects had not applied any of the work into clinical practice.

Some comments have been extracted from the semi-structured interview, which describe this positive effect of the training on perception of voice and application into clinical practice. The positive shifts vary in degree. Some subjects described an increased awareness of voice or parameters of voice, subtle changes in concept or perception of voice and sometimes powerful shifts in approach to clinical practice. Subject 7 described a shift in her concept of voice

and perception of voice. She described the shifts that she observed in her own voice as;

“...very subtle things. Particularly when you are working with a fairly normal voice. Speech pathologists are very used to listening for disordered things and things that aren’t quite normal. And that’s what I found the challenge in the workshop – to listen to those (shifts in normal voice). You know, Isobel was calling them significant changes, but to my ears it was still quite a subtle change and I think that is an education for your ears.”

Comments based on clinical application of the training show how the subjects’ shifted concept of voice affected their approach to clients. The shifts in clinical approach were often a direct application of a theatre voice technique. For example, the spine roll was used successfully by one subject. She found that;

“because it is a more physical activity it can produce a more obvious difference between tension and relaxation. They (the clients) get so tense talking to us. It gets me really relaxed because if I do it as well it almost breaks the ice.”

However, most of the shifts in clinical approach were based on a conceptual shift in approaching the client and voice. Many of these conceptual shifts were based on the shift in concept of voice from the laryngeal level to the whole body (See Table 5 “Point to where your voice is now”). Subject 3 reported a different approach based on this conceptual shift:

"I sort of took a different approach rather than making him aware of where his voice was coming from in a scientific way, I shifted the focus right down to lower down here for voice and breath, and immediately he got this fabulous voice."

Subject 7 commented on the notion of connecting emotion with voice and that her shift in understanding of voice as a means of revealing emotion had given her an approach to dealing with clients on a deeper level. It had allowed her clients to feel freer to use their voice, because she was able to offer them an understanding of it on more than a physical level.

A number of subjects commented that their approach in inquiring about voice with a client had changed. Subject 3 found that

"It was more relevant for him (the client) to be thinking 'how does that feel', and then he could recognise when he was tightening up and where his voice was coming from. He knew then the signs for when it was tightening and when the voice was not going to be any good."

This shift in approach allowed the client to experience the sensations of voice, which could be recalled at a later date. In effect, subject 3 shifted from the medical approach of patient/doctor (as discussed in Aim; The Two Voice Disciplines - Some Differences) to one where the client was able to own the knowledge along with the specialist.

All subjects commented positively about the effect of the training on their perception of voice. Table 4 describes the comments made by all the subjects about the perceived change in perception of voice as asked in the questionnaire. All subjects were asked to respond at 1 week and at 4 months to the question; "Do you believe that your perception of voice had changed as a result of the theatre voice training with Isobel Kirk?" (Appendix B, 2.1). However, unlike the previous results, there appears to be a distinction between the 2 training groups. The 2 intensive trainees who had further training up to the 4 month period described the effects of the training differently to the basic trainees who had only one intensive weekend of training. These 2 subjects described their shift in perception of voice as personal and subjective. Both used the word "my" to describe their shift. They used a broad range of terms to define their shift in their understanding of voice. Some of these terms were breath, voice source, emotion and meaning, use of language and muscular tension. Their definitions displayed an integration of the training at a more personal level than for the basic trainees. By comparison, the basic trainees described the shift in perception of voice as objective and separate from their own experience of voice.

Table 4: All subjects responses at 1 week and 4 months to the question; Do you believe that your perception of voice had changed as a result of the theatre voice training with Isobel Kirk. Subject 6 did not record a result at this period. The 2 intensive trainees are depicted as shaded cells.

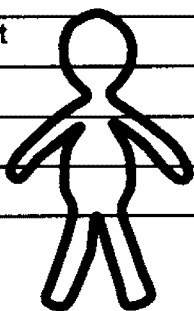
subjects	1 week	4 months
subject 2 (basic)	I am more aware of chest resonance	I am more aware of voice and breath.
subject 3 (intensive)	Yes looking at the effect of breath and the source of sound	Yes I am more aware of where my voice gets blocked and more able to relax and lower the origin
subject 4 (intensive)	Yes, it has enabled me to perceive change of voice from the client's perspective and value my voice/language more	Yes definitely. My physical awareness, breathing breath, awareness of my voice (and what helps) and others' voices. Awareness of importance of language.
subject 5 (basic)	Yes, more aware of how actors use their voice to convey meaning.	Yes more aware of emotion/meaning being portrayed through the voice.
subject 6 (basic)	I now have more knowledge of the lexicon used by professional voice users to describe voice as well as a broader definition of good voice (to include theatrical voice)	Not answered
subject 7 (basic)	Yes I think in quite subtle ways; especially, impact of breathing, muscular tension on voice	Yes, but I think that this has decreased somewhat over time. Need some ongoing discussion, revisiting of what was covered to really make it more permanent.

Conceptual Awareness of Voice

A question in the semi-structured interview asked subjects "Point to where your voice is now". A general trend was a shift from a higher part of the body to a lower part. Some subjects combined the concept of voice with breath, possibly showing a shift in thinking to a more integrated concept of voice. One subject did not record a response to the question at 4 months. None of the subjects pointed any lower than their upper abdomen (4-5 cm above the umbilicus) at the pre-training period. However, all subjects who commented at the 4 month interview, pointed to the sternum/chest level or below. Both of the intensive trainees commented on the changeable nature of their voice depending on their feeling or situation. Table 5 shows how each subjects' perception of their voice shifted as a result of the training. The number of times that the subjects use a key word or gesture is tabled.

Table 5: Analysis of subject's responses to the semi-structured interview question; "Point to where your voice is now". The 6 subjects were asked to point on their body to where they thought their voice was at each period of the study; pre-training, 1 week and 4 months. "X" refers to a gesture made on the body or a comment made as to the positioning on the body

key words	pre-training n=6	1 week after basic training n=6	4 months after basic training, basic trainees n=4	end of 4 month intensive training, intensive trainees n=2
head and throat	X	X		
larynx	XXX	X		
sternum/chest	X	X	X	
solar plexus	X	XX		
belly/ stomach/ abdomen		XXXX	X	X
whole body/ whole, complete system/ torso/ "brain and breathing"		XX	XX	
changes/ different places dependent on feelings				XX
not recorded			X	



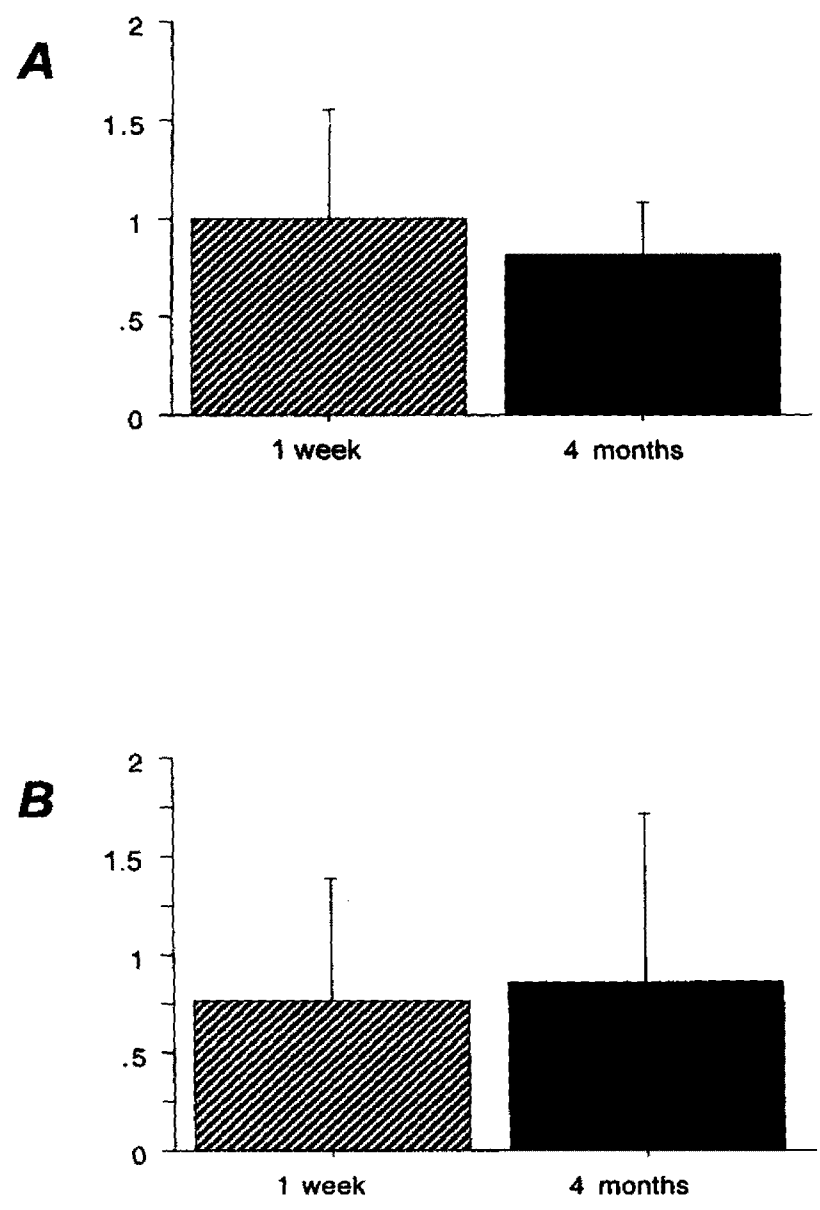
Use of Language

The subjects' use of passive and active language was analysed from the interview transcripts. Specific words selected that represented the kind of active and passive language as might be used in discussing voice are detailed in Chapter 3: Method (p.68). The finding for 3/6 subjects was that there was a decrease in active language as a percentage of total language use after 4 months and an increase in passive language after 4 months. These results are depicted in Figure 1. The decreases in active language ranged from 0.28% to 0.85% and the increases in passive language from 0.22% to 1.39%. Only 1 of the 6 subjects showed the reverse trend, increasing in active language from 0.68% to 1.03% and decreasing in passive language from 1.82% to 0.57%. Another 2 were anomalous, one increasing in active language from 0.29% to 0.66% and the other decreasing in passive language from 0.61% to 0.14%. The low percentages are not necessarily insignificant. As an arbitrary example, if a subject reduced her use of the word 'try' from 25 uses out of 4000 words at 1 week to 16 uses out of 3500 words at 4 months, the decrease in word usage would be 0.17%. It is, in fact, the magnitude of the change in use of language that is more significant than the percentage value. To hear an active word more often reinforces its meaning and hence the activity that it requires. To reduce the frequency of the use of that

word will reduce the strength of its effect on the voice or body. In the same sense, the increased use of a passive word will encourage rather than enforce, which is the ultimate goal of theatre voice training.

In effect, this result is a more truthful representation of a shift in language than the responses to the question; “Did you perceive a shift in your use of language?” (Appendix C, 4), which asks the subjects for a perceived shift in their own language.

Figure 1: The mean shift in language for individual subjects from active to passive language during the two interviews; 1 week after the 2 day basic training weekend and 4 months (4 months after the basic training for the basic trainee group and immediately after the entire training for the intensive trainee group.) The results are based on a selection of active and passive words as addressed in the training and which might be used in clinical practice. The results display the total mean of active language (Part A) and total mean of passive language (Part B) for all subjects at the two intervals as a percentage of the total words spoken. Error bars represent 95% confidence interval.



Although Figure 1 only takes into account about 1-2% of the total language use for each interview, it is the cumulative effect of the quality of these specific words that bear weight. These mean percentages can also be looked at in terms of frequency of use for each selected word. This describes a clearer picture of the shift in language use and the effect that is carried with this shift. For example; Subject 4 reduced her use of the word 'try' from 19 uses out of 3977 words at 1 week to 3 uses out of 2391 words at four months. She commented in interview at 4 months;

"I kept bringing myself back and thinking about what I was saying and I thought; "ok let's try and... not try, what did I say? Allow the breath to move freely, just out and in and out and in and I wasn't aware of that before."

Subject 7 perceived that she had increased her passive language, particularly with the use of the word "feel". Her recorded use of the word "feel" also showed a marked increase. At 1 week she used it 14 times out of 3132 words and at 4 months she used it 21 times out of 3013 words. She had also applied this into clinical practice. She commented at 1 week;

Yeah I saw a client yesterday and probably my questioning had changed a little bit; I said to him; "Do you ever feel....", "Does it feel like it's an effort to produce your voice. Do you feel like you have any tension here or in your face or in your neck?"

And at 4 months;

Yeah, saying 'How does it feel?' to that guy yesterday and I've said it to a few people recently.

Subject 4 observed a direct effect of her conscious use of language during clinic;

"I definitely think more about what I say with my patients. It was amazing how when I changed my language... I was saying 'allow your breath to flow over your tongue and out your mouth, just let it flow in and out, in and out; she could do it, she got this beautiful clear voice. It was so lovely."

However, for a few subjects the actual language shifts that were measured were opposite to the group mean. Subject 3, an intensive trainee, is an example. Her use of the selected active words increased at the 4 month period and her use of the selected passive words decreased at the 4 month period.

For one subject, her skills in perception display instability. Subject 6 reported at 4 months that she was more aware of her use of "try" and the negative effects that it had in practice. However, during the same interview, she commented that "I've been trying to be more positive". This may be interpreted as a shift in perceptual skills or simply a lack of awareness.

MEASUREMENT OF CONCEPT OF VOICE

Concept of Voice Based on VAS Ratings

The 6 subjects displayed a shift in their concept of voice when data are compared for the 6 subjects' concept of their own voice before and after the basic training. These results were statistically significant using a one-way analysis of variance ($F 4.93$; $df=1,81$; $P=0.03$, Figure 2A). The average mean for the 6 subjects at pre-training was 74.4 mm and at 1 week it was 64.7 mm.

In order to consider whether this effect was sustained, the 4 subjects who had no further contact were considered separately to those who continued to train over 4 months. The 4 subjects also displayed a shift in their concept of voice before and after the basic training ($F 5.32$; $df 1,53$; $P=0.03$, Figure 2B). This effect was sustained after 4 months without any further training in theatre voice techniques ($F 7.70$; $df 2,80$; $P=0.0009$, Figure 3A). The average mean for this group at 4 months was 83.1 mm

The basic trainees (n=4) rated greater average values for shift in concept of voice at both 1 week and 4 months than their initial pre-training values. This suggests that the training had a positive effect at 1 week and was sustained after 4 months.

When all subjects were considered as a group, the effect of the training was not significant ($F 2.75$; $df 2,121$; $P=.07$, Figure 3B). Scheffé post hoc analysis revealed no significant comparisons between any of the 3 occasions. Figure 3C describes the difference between the 2 groups over the 3 periods. The average mean values for the intensive group after 4 months of continued training was 52.6 mm and suggest a shift for concept of voice in the opposite direction to the basic trainees whose average mean at 4 months was 83.1 mm.

In both groups, the 95% confidence intervals reveal variance in ratings and individual use of the scales. Consistently, subject 6 (a basic trainee) rated all scores in the top 30% of the VAS scale. In effect, she was rating her own voice at 70% or above on a scale of poor to excellent. At 4 months, she rated 100 mm, the maximum value of the scale, for 3 parameters. By comparison, subject 5's (basic trainee) ratings ranged from 28 mm to 92 mm. Subject 4 had not scored a rating at 4 months for parameter 7; "How well do you listen to others?" She had placed the values for this parameter over a range between

53 mm and 100 mm and added the comment “depending on the situation clinically”. Although her rating on the VAS for this parameter is statistically invalid, it is worth consideration. She had shifted in her awareness of this parameter. Her ability to listen to others at 4 months was now dependent on situation and the case/individual presented in clinic.

The 2 intensive trainees (subjects 3 and 4) both displayed lower values at the 4 month period than at pre-training for many of the parameters. Subject 4 consistently rated lower values at 4 months for all parameters compared to her 1 week values, except for the range of values she elected for the one parameter “How well do you listen?” Her concept of voice shifted dramatically in the opposite direction to expectation and in comparison to the basic trainees.

Figure 2: Shift in concept of voice, based on 7 VAS measurements for concept of voice (see Method), described over the two training intervals; pre-training and 1 week. Part A illustrates the responses of all subjects (N=6) to the question, "Does theatre voice training affect concept of voice?" Part B illustrates the responses to the same question for the basic trainee group only (N=4). Error bars represent 95% confidence interval.

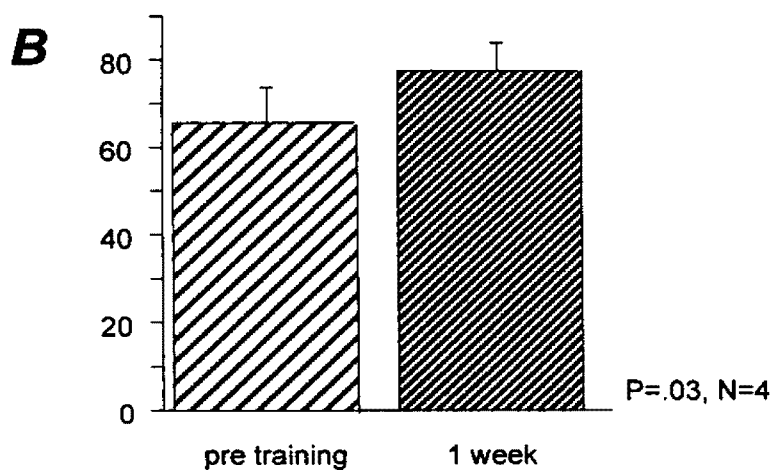
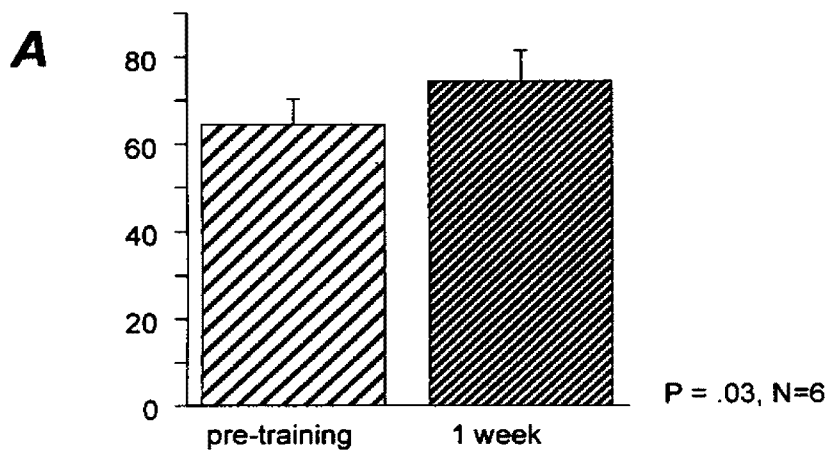
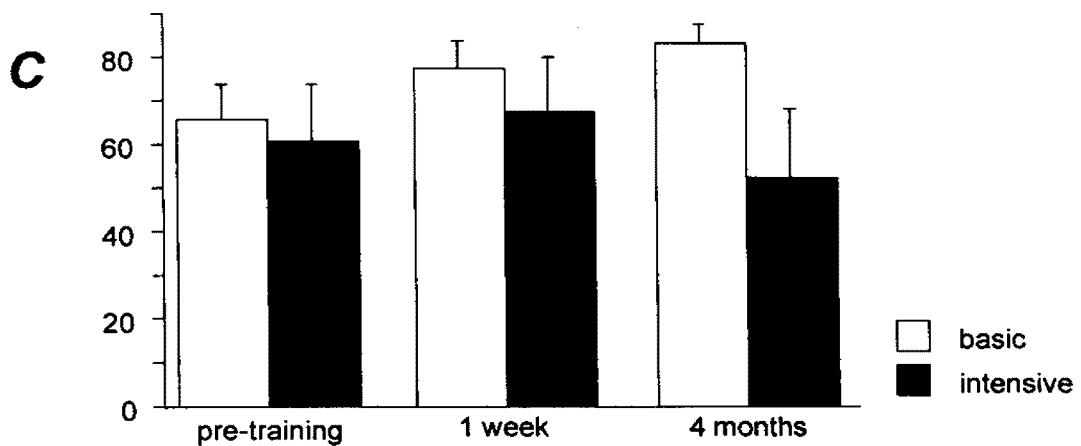
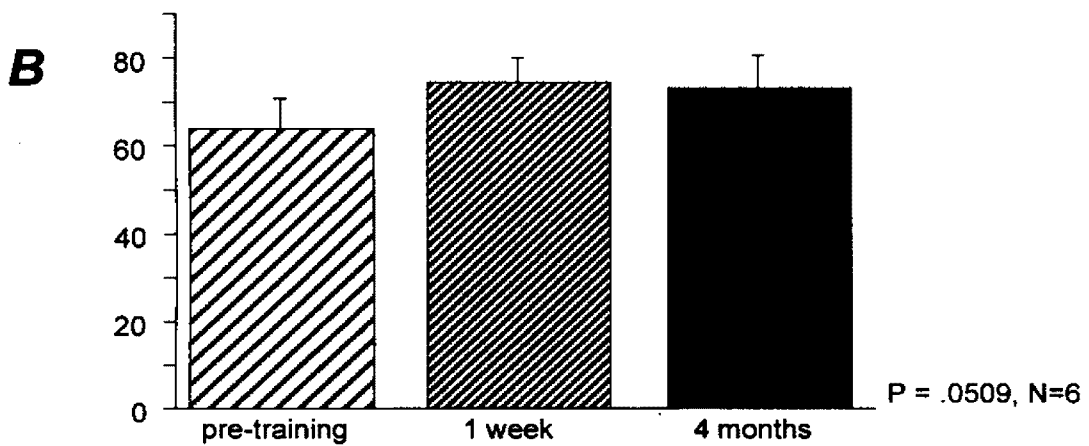
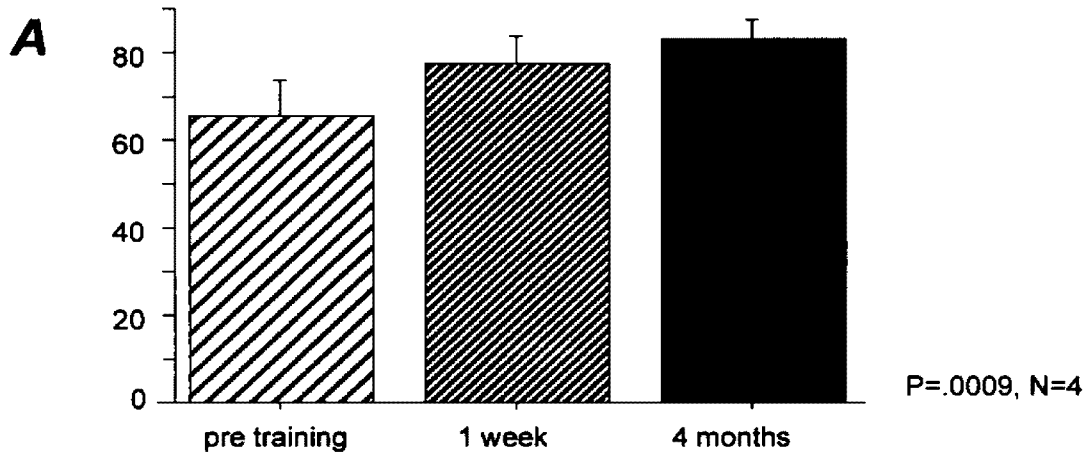


Figure 3: The shift in concept of voice over the three intervals; pre-training, 1 week and 4 months, based on the same measurements as in Figure 2. Part A illustrates the shift in concept of voice over the three intervals for the basic trainee group (N=4). Part B illustrates the shift in concept of voice over the three intervals for all six subjects (N=6). Note here that the addition of the 2 intensive trainees produces a non-significant result at 4 months. Part C demonstrates a likely reason for this as the sample at 4 months produces divergent results for basic and intensive trainees (see Results). Error bars represent 95% confidence interval.



CLINICAL APPROACHES

The 6 subjects' self-perceived usage of different clinical approaches was analysed. The semi-structured interview and questionnaire were used to ascertain whether the subjects had perceived or rated a shift in their clinical approaches to voice as a result of the training.

Self Perceived Clinical Approaches

General Clinical Approaches

Generally, clinical approaches and use of equipment shifted for all subjects at varying degrees. All subjects commented that they expected their clinical approach to change as a result of the training. 4 out of 6 of the subjects described their application of some of the training techniques as being integrated into their current knowledge. Subject 4 commented at 4 months that:

"I would continue to use the approaches previously used but would include Kristin's/Isobel's approaches and include/be aware of breath/tension and the effects that emotion has on voice."

Generally, there was an increase in a physiological approach to voice after 4 months. Subject 5 described her approach to voice at 4 months as having an:

“Anatomical/physiological base linked to a perceptual approach”

At 4 months, subject 2, had integrated a psychological and physiological approach to voice, whereas at pre-training and 1 week her approach was physiological and perceptual.

Basically, use of equipment used in assessment procedure showed little variation for the basic trainees. Predominantly, they used stopwatches, tape recorders, Visipitch and acoustic and aerodynamic voice analysis systems for all periods of the study. However, both of the intensive trainees shifted in their use of equipment after 4 months. They commented at 1 week that they used tape recorder, stopwatch, Visipitch and relied on some perceptual measures such as hearing. By 4 months, subject 3 listed her equipment for assessment procedure as ears, eyes, hands and brain and subject 4 listed “my ears, hands, eyes mostly and Visipitch to measure pitch.” Overall, both the intensive trainees after 4 months of training relied more heavily on perceptual analysis.

Treatment of Laryngeal Constriction

Throughout all periods of the training, all subjects mentioned the use of Estill voice techniques in the treatment of laryngeal constriction, for example; sob and giggle. Relaxation and reduction of tension also featured as favourable techniques. The most significant shift in the treatment of laryngeal constriction was for the intensive trainees at 4 months, where they combined Estill techniques with techniques of relaxation, sensory awareness and breath. For both the intensive trainees and one of the basic trainees, breathing techniques were mentioned as effective and only feature at the 1 week period for the basic trainee and at both 1 week and 4 months for the intensive trainees.

Subject 3 (intensive trainee) described her approach at 4 months as having evolved from Estill techniques to:

“Sensory awareness, changing focus of voice to abdomen. Aim to keep breath and voice channels open. Retaining awareness of voice and breath in belly.”

Subject 4 (intensive trainee) described her approach at 4 months as shifting from the use of sob, giggle, release of unnecessary muscular tension to:

“Teaching the difference between tension and relaxation, physical awareness, freeing the breath and using imagery/appropriate language to allow the person to feel the breath moving freely. Open the channels. Also to use other methods used previously in combination with the above ie: resonance work, sob”

Perceived Value of Perceptual Analysis

A question in the semi-structured interview asked subjects; “What value do you place on perceptual analysis”. Subjects were required to place a mark on a VAS scale to indicate whether they thought the value of perceptual analysis as a clinical tool was limited or extensive. The total mean for the group at pre-training was 85.5 mm (SD 11.06), at 1 week the total mean was 89.0 mm (SD 10.66) and at 4 months the total mean was 86.5 mm (SD 10.04). Overall, the value that this group of subjects placed on perceptual analysis was high. On average, there was little variation in the value they placed on perceptual analysis as a result of the training.

Principles of Voice

Question 3.6 in Appendix B asked subjects to describe which principles of voice, if any, would you apply to various language, articulation and fluency disorder groups (see Method). Data were available from 4 subjects; 3, 4, 5 and 7. The responses to these questions vary. The main finding was that the 2 intensive trainees (3 and 4) recorded more change in their clinical approach than the 2 basic trainees did. Subject 5 (basic trainee) showed little change in her use of techniques over the 3 periods. By 4 months, subject 7 (basic trainee) had begun to approach articulation and phonological process more specifically by decreasing jaw tension, using voice freeing techniques and working with a free and easy tongue. Previously, at pre-training, she had made no response and at 1 week she was using generic techniques of clear pronunciation, strong voice and breathing work. Her approach to this disorder group became more specific.

Subject 4 (intensive trainee) showed the most frequent shift in techniques and approaches over a number of these disorder groups. She has incorporated breathing techniques of the training weekend to aid in her approach to patients with aphasia. At pre-training, this subject was using basic relaxation and breathing techniques for this

disorder group and by 4 months she had adapted breathing and relaxation techniques to help in “freeing the breath to allow for increased thinking especially for patients with word finding difficulties.” She had also shifted in her approach to dysarthria. At pre-training, she used breathing and relaxation techniques. By 1 week she had incorporated imagery to increase meaning of language and at 4 months she included awareness of articulators as a technique for this disorder group. For both dyspraxia and stuttering at 4 months, she integrated techniques of breath and flow with the cumulative development of language from simple sound to syllable to word to phrase and to conversation. These are techniques that were addressed during the intensive trainees training during the 4 months. By comparison, she states that she did not know how to approach stuttering at the pre-training and 1 week periods.

Subject 3 (intensive trainee) shifted her approach to velopharyngeal insufficiency after 4 months. For the 1 week period she uses basic velopharyngeal insufficiency exercises but at 4 months she incorporated the sideways yawn technique as learned in the training and increased her use of sensory awareness.

MEASUREMENT OF CLINICAL APPROACHES

Management of Voice Clients

The subjects were asked to rate their perception of how their management of a voice client had changed as a result of the training at 1 week and at 4 months. The main finding was that, on average, the intensive training group perceived almost twice as much change in their management of a voice client after their four months training than the basic training group at 4 months, who had received no further training during this period.

Table 6 shows the perceived change for the parameters for each group (basic and intensive) used to measure perceived shift in management of a voice client. The scores are for each training group at the two measured intervals of 1 week and 4 months. As data for pre-training was not available, this perceived change was not analysed statistically.

Table 6: *The perceived change for all parameters used to measure approaches to and management of a voice client in clinical practice at 1 week and 4 months. Results for the basic and intensive trainees are presented separately. Scores are measured in millimeters. Standard deviations are in brackets.*

	1 week basic trainees (n=4)	4 months basic trainees (n=4)	1 week intensive trainees (n=2)	4 months intensive trainees (n=2)
physical presence	55 (26)	45 (16)	41 (21)	89 (06)
psychological approach	36 (40)	36 (21)	68 (07)	86 (29)
sensory awareness	37 (15)	50 (05)	58 (01)	80 (30)
breath	60 (28)	54 (17)	87 (18)	87 (09)
language	37 (28)	46 (16)	82 (25)	89 (36)
voice	48 (29)	58 (31)	63 (32)	69 (01)
mean of all parameters	46 (28)	48 (17)	66 (17)	83 (17)

All subjects increased in their mean values for change at 1 week after the initial training weekend with a 45 to 66 mm of change recorded with the higher value recorded by the 2 intensive trainees. At 4 months, the basic trainees sustained this level of change (mean 48 mm), while the intensive trainees recorded a perceived shift of 16.8 mm over the 4 month period.

Ratings for the shift in the management of a voice client vary greatly. For example, for the basic trainees, scores for particular parameters range from 2 mm for subject 2's awareness of psychological approaches to 89 mm for subject 7's understanding of breath in communication. For the intensive trainees, scores for particular parameters over both occasions also vary greatly. They range from 26 mm for Subject 4's awareness of physical presence to 100 mm (the maximum value of the scale). At both occasions, subject 4 rated 100 mm for 5 of the parameters used to measure the shift in management of a voice client. These were her understanding of breath, her awareness of her physical presence, her awareness of her psychological approaches and her choice of words.

CHAPTER 5 - DISCUSSION

One of the most striking findings of this study was that each of the 6 subjects reported a large number of positive changes in their concept of voice after the training. Changes reported in questionnaire and interview were generally sustained for a 4 month period by all subjects and the quantitative changes were sustained by 4 of the subjects who underwent the basic weekend training at the commencement of the 4 month period of study. The 2 subjects who underwent an additional 4 month period of intensive training reported negative quantitative changes after this intensive training and these data are discussed below. Changes reported from the questionnaire responses and interviews included perceived shifts in voice quality, physical awareness, awareness of breath, language use, sensory awareness and how these were applied practically into clinical practice.

Interpretation of the results of this study, and in particular the qualitative semi-structured interview and questionnaire data, carries the limitation that the interviewer and the author of this thesis regularly assists Isobel Kirk in training and presentation of workshops for speech pathologists. The lack of independence of the author from the trainer is a significant limitation in the design of this study although it is

one that could not have been avoided as the author's interest arose from her work with Isobel Kirk. This limitation needs to be considered in interpretation of these data. It is also important to point out that the research question could probably have been pre-determined by the subjects. It is likely that, without being told, they were aware that the purpose of the study was to evaluate the effect of theatre voice training on their concept of voice. A way around this would have been to triangulate the data by also interviewing some of the speech pathologists' patients before and after training. Although not easy to set up due to the relatively short-term nature of the treatment of many voice clients, this would have provided more objective data about possible changes in approach and language used by their speech pathologist. The scope of the present study did not allow for this but it is suggested as a useful extension for future research.

Overall, all subjects altered their definition of voice as a result of the training. This observation is not surprising as the goal of theatre voice training is to explore voice in a holistic sense. Nevertheless, it was apparent that all subjects showed a significant shift in the origin of their voice, incorporating it with breath and experiencing breath in the belly as explored in their training. Some described their voice as a whole system connected to thought and even feeling. After 4 months training for the two intensive trainees, their definition of voice

simplified to encompass the whole voice, incorporating two fundamental elements: breath and vibration. This shift in definition might be considered significant because it allowed the speech pathologists to experience voice from a perspective outside their established knowledge. The definition of voice as thought and feeling integrated with breath and vibration was new and encompassed the whole human being. In support of these definitions, Table 5's results show a general trend for all subjects (except one unrecorded) in their perception of their voice in their body from a higher part of the body to a lower part. Some subjects also combined the concept of voice with breath, possibly showing a shift in thinking to a more integrated concept of voice. Additionally, both of the intensive trainees commented on the changeable nature of their voice depending on their feeling or situation. This shift in definition of voice suggests a more holistic understanding of the human voice.

Additionally, changes were noted in the language the trainees used to describe voice and in communication with their patients, which incorporate less medical terms. This was particularly true for the intensive trainees. This had direct ramifications in their approach in clinical practice, where subjects often reported remarkable results.

The quantitative data supports these qualitative data. Each of the 6 subjects perceived that the effectiveness of their voice in communication as well as their ability to listen and success at being heard was improved after the weekend course compared to before any training. Moreover, these successful results were maintained at the same new high level for each of the 4 basic trainees over a 4 month period in which no training occurred. After such a long period with no intervention it might be argued that it would be more likely that subjects would feel more independent from the author and the trainer; Isobel Kirk, however, no negative shifts were observed from the visual analogue data at this period. Considered together, the qualitative and quantitative data concerning the training provided by the initial (basic) training weekend supports the hypothesis; that spoken voice techniques as used in theatre voice training would have an effect on a speech pathologist's concept of voice and practical application to clinical practice. Interpretation of the data following the intensive 4 month training will be considered in the next section.

Basic and intensive trainee differences

An early aim of the study was to attempt to describe both the effects of theatre voice training and to determine whether a weekend course would produce similar changes as the more intensive course. The latter is more representative of vocal training experienced by actors in

theatre. The difficulty in designing this second part of the study was that a longer course required a substantial time commitment by subjects. The basic weekend course attracted 6 subjects willing to train for a weekend. The intensive 4 month training required attendance at 75 hours of training by speech pathology voice specialists. That only 2 subjects volunteered for this training is not surprising. It is acknowledged that the total number of subjects for this study are thus too small to draw any conclusions about differences between the two training methods, basic and intensive. However, some observations are offered about the intensive compared to the basic training.

The most notable difference between the groups is the measured shift in concept of voice after 4 months. The intensive trainees rated their concept of voice after 4 months of training negatively in comparison to their pre-training values and in comparison to the basic trainees who had no further training. This may suggest that they perceived the effectiveness of their voice to communicate the 7 measured parameters as poorer than before the training and than the basic trainees at the same period. (The 7 parameters for concept of voice were thoughts/ideas, feelings, heightened emotion, how voice served them socially, ability to listen and success at being heard.) It could be interpreted that this statistically negative result proves that the training

had a negative effect on concept of voice. Or there may have been some aspect of this training that made these 2 subjects view the process negatively.

In contrast to this however, during the interviews, the 2 intensive trainees' perception of change in their concept of voice and application of this concept into clinical practice was positive and it appeared more comprehensive than that of the 4 basic trainees. Certainly, subject 4 (intensive trainee) experienced quite significant shifts for every parameter of concept of voice and clinical application.

A possible reason for this anomalous shift may be related to the experiences of the 2 intensive trainees. The training was experiential in nature and necessarily more concentrated than that of the basic trainees. It could thus be suggested that their exposure to a different approach allowed them to consider and experience voice in a more holistic context and from a different perspective from their previous training. That they worked alongside other trainees not from a speech pathology background, including actors, would tend to highlight the differences in training to that which they had experienced in speech pathology training. It may be suggested that the reflective insight of the 2 intensive trainees improved over the 4 month training period. The longer period of training may have given them a broader definition

of communication and given them deeper insight into their own clinical behaviour, hence developing a “truer” picture of their capabilities as voice specialists.

In addition, the qualitative data support that there was no negative effect of the training on the subjects’ concept of voice. In fact, the most outstanding result of this study was that the 6 subjects reported a large number of positive changes about their concept of voice (Table 3). For this reason, it might be suggested that the training in theatre voice techniques allowed the intensive trainees to experience voice on a broader scale. Their concept of vocal potential was challenged and therefore their entire concept of voice shifted to account for this potential. It is suggested that their standards and frame of reference had changed. The design of this study did not allow for such an idea to be tested as it was an unanticipated finding.

Clinical Approaches

The personal changes experienced in voice allowed the subjects to develop an awareness of what they might hope to achieve in future clinical practice. The broadening of the subjects’ concept of voice opened up the possibility for different and potentially more creative approaches to therapy. Some of these creative approaches to therapy are evident in the subject’s comments in the semi-structured interview

(Appendix D). It is this creative and experiential approach to practice that is not explicitly addressed in medico-scientific education, however has proven merit in the results to clinical approaches.

All subjects rated changes in the management of voice clients. These changes have been found quantitatively. The changes were based on their awareness of their own physical presence, psychological approach, sensory perception, breath, language and quality of voice in clinical practice. These changes in approach were dramatic 1 week after the training and were sustained for the 4 months. Again, the intensive trainees rated and described more convincing shifts, incorporating their shift in concept of voice with their clinical approach.

For many of the subjects, regardless of the intensity of training, there was a direct correlation between what they had learnt with their own voice and what they had applied into clinical practice. It could be argued that, during training, these speech pathologists relied on the learning mode of “knowing how” rather than “knowing that” as defined by Verdolini (1994b). The “knowing how” learning mode is dependent on implicit memory, which is governed by perceptual processes, which is an essential element in experiential learning. Whereas the “knowing that” learning mode is governed by explicit and analytical knowledge, as is the common in medico scientific approach to learning. The basic

and intensive training allowed these speech pathologists to access the experience of voice techniques via implicit learning, which by definition gave them a more personal experience of voice. Andrews and Schmidt (1999) support Verdolini's (1994b) argument by identifying the importance of intuitive and perceptual monitors for the clinician/coach. As found with the speech pathologists in this study, the experience of their own voice via intuitive and perceptual measures provided information about the dynamic interrelationship between voice and the individual. As a result, more precise and insightful treatments inevitably ensued.

Andrews and Schmidt (1999) proposed that "Additional research is needed to help us understand ways to stimulate (novice speech pathology) students' abilities to perceive and apply the critical behaviours inherent in effective voice treatment" (p.233). The study of this thesis provides some insight into training approaches for speech pathologists by exploring the experiential learning mode of "knowing how" rather than the "knowing that" and shows that the personal experience of voice influenced their management of a voice client.

Some changes in specific clinical approaches were adopted by the trainees as a result of the training. Clinical approach was positively affected by shifts from active to passive language. All subjects

commented on their use of language in the semi-structured interview. The 2 intensive trainees consciously shifted their language in clinical situations to affect the vocal outcomes of their clients. For the basic trainees, only two of the four consciously shifted their language in clinical practice.

The gap between conscious and unconscious use of shifted language is difficult to assess however, it is noted in the comments from one of the basic trainees. Although this basic trainee (subject 6) noted that she was conscious of the negative effect of the word 'try', she follows this comment with the unconscious use of the same word in, "I've been 'trying' to be more positive". This may suggest that her understanding of the effect of active and passive language on voice and in clinic is unclear. That the both intensive trainees show no inconsistencies between unconscious and conscious use of passive and active language in clinic may be an argument supporting the value of a more intensive training period. However, as the number of intensive trainees is small, this cannot be a conclusive result.

Comments made in the questionnaire regarding the selected articulation and fluency disorder groups suggested a positive use of theatre voice techniques by 4 of the subjects. These subjects applied the theatre voice techniques of relaxation/tension, breathing and

sensory awareness to assist in fluency of breath and muscle movement. One subject even linked breathing techniques to imagery and descriptive language for a more powerful result. The theatre voice techniques they applied provided alternative approaches to these voice disorder clients, allowing the clients to experience voice in a less medical and more personal way.

Professional implications

The results of this study raise some salient implications for education. The very limited opportunities for undergraduate speech pathologists in working with their own voice internationally and in Australia was described in Chapter 1 (Table 1a and 1b). The Karolinska Institutet and the University of Iowa have made the most significant contributions to training in this area within the courses they offer. Karolinska Institutet has the only course surveyed in the current study that offers this kind of training as preparatory to graduation. Although it is recognised that undergraduate speech pathology programmes are currently overburdened with prerequisite courses for graduation, the results of this study strongly suggest that the outcomes of personal training in voice are worth consideration at an undergraduate level. Not only would training in theatre voice techniques offer the undergraduate speech pathologist an experience of his/her own voice,

which has proven applications into clinical practice, but it would also expose them to training approach that is antithetical to traditional medico-scientific training. This exposure to a less academic approach to voice has been effective for this group of speech pathologists with only an exposure of 12 hours offered over a weekend. Working with their voice has allowed them to understand the effects of psychological approach, voice, breath, physical presence, language and ability to listen when dealing with their own clients.

However it is acknowledged that it is only a minority of speech pathologists that specialise in voice like those sampled in this study and it is possible that theatre voice training might not be relevant for those with generalist or non-voice specialities. The nature of the link to voice might suggest that a basic period of training would be highly relevant as a part of graduate courses, certificates or diplomas in voice should such be offered by a training institute for speech pathology.

It is interesting to look at how this study parallels De Boer and Shealy (1994). Although their study's structure differed and the focus was on singing, there are striking similarities in the results. They found

evidence for a potentially significant carry over from the voice studio to the speech clinic. They also conclude with a recommendation of designing an interactive curriculum at the graduate level for voice majors.

CONCLUSION

The effect of training this group of speech pathologists in theatre voice techniques has proven worthy and delivered outcomes that support the integration of the two disciplines. This study hopes to inspire voice specialists to remain open to the approaches and methodologies of alternative disciplines and to encourage future researchers to explore these outcomes for the benefit of the entire voice community.

APPENDICES

APPENDIX A: PRE-QUESTIONNAIRE

General questionnaire given only at pre-training

1. General

1.1 How many years have you been working as a speech pathologist?

1.2 Briefly list your qualifications.

1.3 What area of speech pathology do you specialise in?

1.4 On average, how many voice clients would you see in a week?
Please circle.

0-5, 6-10, 11-15, 16-20, 20 or more

1.5 Why are you interested in the area of voice as a speech pathologist?

2 Training

2.1 What training have you had in voice prior to this Intensive?

2.1a) At undergraduate level _____

2.1b) At a post graduate level _____

2.2 How has this training been useful in voice therapy?

2.3 Has it been effective in your personal life? If so, how?

2.4 What training do you know of that is available to speech pathologists in the area of voice at a post graduate level?

2.5 What do you consider as standard voice techniques for a voice specialist in speech pathology? Eg: Estill, Alexander Technique, Boone or others.

2.6 What do you understand theatre voice techniques to mean?

2.7 Why have you chosen to train further in voice studies?

2.8 How do you expect this intensive training course to enhance your practice?

2.9 What are your expectations of this intensive training weekend?

APPENDIX B: QUESTIONNAIRE

Questionnaire used at each period of the training

1 Personal

1.1 How would you describe your voice at present?

1.2 Describe how you would like your voice to be?

1.3 What affects your voice?

1.4 Describe your quality of listening?

1.5 Place a single stroke on each of the visual analogue scales below in response to the following questions.

1.5a) How well does your voice communicate your thoughts or ideas?

Poor excellent

1.5b) How well does your voice communicate your feelings?

Poor excellent

1.5c) How well does your voice serve you in social situations?

Poor excellent

1.5d) How well does your voice serve you in clinical practice?

Poor excellent

1.5e) How well does your voice serve you in situations of heightened emotion?

Poor excellent

1.5f) How well do people seem to listen to and comprehend you?

Poor excellent

1.5g) How well do you listen to others?

Poor excellent

1.6 How important are the following in your management of a voice client?

1.6a) Your awareness of your physical presence, for example; body language?

Not important very important

1.6b) Your awareness of psychological approaches?

Not important very important

1.6c) Your sensory awareness, for example; your proprioceptive, your auditory, your tactile, your visual, your olfactory awareness?

Not important very important

1.6d) Your understanding of your breath in communication?

Not important very important

1.6e) Your choice of words?

Not important very important

1.6f) Your quality of voice?

Not important very important

2 Perception

2.1 Do you believe that your perception of voice has changed due to the intensive weekend in theatre voice techniques with Isobel Kirk? If so, how?

2.2 How would you define voice?

2.3 What do you think is communicated through voice?

2.4 When do you think a voice is effective?

2.5 Other than for medical reasons, when do you think a voice is ineffective?

2.6 What do you think is the value of voice work for performers?

2.7 What do you think is the value of voice work for speech pathologists?

2.8 What value is there for speech pathologists in combining speech pathology and theatre voice techniques?

2.9 What value is there for the theatre voice trainer in combining speech pathology and theatre voice techniques?

3 Approach

3.1 Who does a voice specialist in speech pathology treat?

3.2 What kind of theoretical approach would you use in voice assessment?

3.3 What equipment do you use in assessment procedure?

3.4 What value do you place on perceptual analysis?

limited extensive

3.5 How would you treat laryngeal constriction?

3.6 Which principles of voice, if any, would you apply to these population groups?

3.6a) Articulation _____

3.6b) Phonological processes _____

3.6c) Aphasia _____

3.6d) Dysarthria _____

3.6e) Dyspraxia _____

3.6f) Stuttering _____

3.6g) Velopharyngeal insufficiency (vpi) _____

APPENDIX C: SEMI-STRUCTURED INTERVIEW

1 *SHIFT IN VOICE*

- a) Did you observe any shifts in your voice during the week?
- b) How would you describe this shift?
- c) What was it that prompted this shift?
- d) Has your perception/understanding of voice changed as a result of this? If so, how?
- e) As a result, has your perception of other people's voices shifted?
- f) Have you observed any effect this shift has had on the way you relate to others?
- g) Have you observed any effect this may have on the way they relate to you?
- h) Have you specifically applied this shift into clinical practice?

2 *PHYSICAL SHIFT*

- a) Did you observe a physical shift during the week?
- b) How would you describe this shift?
- c) What was it that prompted this shift?
- d) Has your perception/understanding of voice changed as a result of this? If so, how?
- e) As a result, has your perception of other people's voices shifted?
- f) Have you observed any effect this shift has had on the way you relate to others?
- g) Have you observed any effect this may have on the way they relate to you?
- h) Have you specifically applied this shift into clinical practice?

3 *SHIFT IN BREATH*

- a) Did you observe any shifts in your breath during the week?
- b) How would you describe this shift?
- c) What was it that prompted this shift?
- d) Has your perception/understanding of voice changed as a result of this? If so, how?
- e) As a result, has your perception of other people's voices shifted?
- f) Have you observed any effect this shift has had on the way you relate to others?
- g) Have you observed any effect this may have on the way they relate to you?
- h) Have you specifically applied this shift into clinical practice?

4 *SHIFT IN LANGUAGE*

- a) Did you observe any shifts in the kind of language that you have been using during the week?
- b) How would you describe this shift? a) When talking about voice, b) When socialising.
- c) What was it that prompted this shift?
- d) Has your perception/understanding of voice changed as a result of this? If so, how?
- e) As a result, has your perception of other people's voices shifted?
- f) Have you observed any effect this shift has had on the way you relate to others?
- g) Have you observed any effect this may have on the way they relate to you?
- i) Have you specifically applied this shift into clinical practice?

5 *SHIFT IN INNER VOICE*

- a) Did you observe any shifts in your inner voice during the week?
- b) How would you describe this shift?
- c) What was it that prompted this shift?
- d) Has your perception/understanding of voice changed as a result of this? If so, how?
- e) As a result, has your perception of other people's voices shifted?
- f) Have you observed any effect this shift has had on the way you relate to others?
- g) Have you observed any effect this may have on the way they relate to you?
- h) Have you specifically applied this shift into clinical practice?

6 *SHIFT IN SENSES*

- a) Did you observe any shifts in your senses during the week?
- b) How would you describe this shift?
- c) What was it that prompted this shift?
- d) Has your perception/understanding of voice changed as a result of this? If so, how?
- e) As a result, has your perception of other people's voices shifted?
- f) Have you observed any effect this shift has had on the way you relate to others?
- g) Have you observed any effect this may have on the way they relate to you?
- h) Have you specifically applied this shift into clinical practice?

7. *Can you point to where your voice is now?*

APPENDIX D: ALL SUBJECTS' COMMENTS IN INTERVIEW

All subject s' comments in interview at both one week and four months (underlined) describing self noted shifts in concept of voice.

Subjects were asked whether they had observed a shift in any of the following parameters for concept of voice, personally or clinically.

Refer to Appendix B for interview questions.

Subject 2

Parameter	Shift	Brief description	Personal application	Clinical application
Voice	1wk <u>4m</u>			
	yes	no	I felt that my voice was quite relaxed and quite strong. I felt quite confident speaking to people that night.	No effect <u>No effect</u>
Physical	yes	no	Suddenly thinking; 'oh I'm getting some abdominal tension' would alter my voice	I've used the concept of less effort ...the sort of natural voice coming out and reducing laryngeal effort.
	yes	I tend to tense my lower abdomen and so, I guess, I've been more aware of releasing		

		that tension there. <u>No effect</u>	for the better <u>No effect</u>	<u>Getting them on the floor and doing other things on them other than just sitting one to one in a room. Before the course, I wouldn't have got them on all fours.</u>
Breath	yes	The first day we were doing a lot of work and just breathing out, and we got a very breathy voice, which I think probably worried most of us. <u>I may be focusing a bit more with patients on breath, certain patients. Using breath to get some release of constriction and some reasonable tone of voice/ voice quality.</u>	More resonance I think, which we probably got at through working with breath and then working at easy phonation. <u>No effect</u>	It highlighted to me the importance of breath. A lot of our patients do hold their breath and not have the breath support for speech and so it might be a good area to work on a bit. <u>I have done a bit of breathing and trying to get that very natural sound without too much effort. There was a lady I had in for intense treatment. We did a lot of the sighing and that was the best voice I heard with her. So we actually started off on the first day with deconstriction and trying to get voice and then the next day I worked mainly on breath and she got much better voice then. Better quality, probably a bit faster. We got</u>

					<u>much better results when I used those exercises.</u>
Language	yes	<u>no</u>	I've been aware of the word try.	No effect <u>No effect</u>	No effect <u>No effect</u>
Sensory Perception	no	<u>yes</u>	No effect	No effect <u>No effect</u>	No effect I <u>guess in terms of listening to patients. I'm more aware of chest resonance.</u>
Specific Application	yes	<u>yes</u>	(Rather) than using their voice either singing or counting, they are actually given some sort of task where you do that more 'hmm' (touch of sound) that natural sort of sound. I think that is actually a good way of reducing effort; laryngeal effort and lower and	No effect <u>No effect</u>	I've sort of taken my oro-muscular stuff further. Like I'd always use the jaw, lifting the palate up, yawning, but doing it with quite a lot of effort. I usually do breathing stuff lying down anyway, but I try and get then to different postures and things like that. Which I tended to do with chairs and things, but I actually got them kneeling down. Someone couldn't relax their abdomen, so that was directed through that and I actually

		<p>upper chest effort.</p> <p><u>The concept of relaxing when you are producing voice. A lot of the Jo Estill stuff is working hard to deconstrict. Just relaxing and producing a sound – the natural sound.</u></p>		<p>used that position to get the diaphragmatic breathing and relaxing that.</p> <p><u>No effect</u></p>
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Subject 3

Parameter	Shift	Brief description	Personal application	Clinical application
Voice	yes	A change in how I use my voice at times.	Getting control of my voice in emotional situations, it's been great fun.	No effect
	1w 4m	<p>yes</p> <p><u>More variation in intonation,</u> <u>probably sometimes a more relaxed sound.</u></p>	<p>Because you are relaxed you can get control of it...</p> <p><u>No effect</u></p>	<u>No effect</u>
Physical	yes	Well that sense of tightness in difficult situations. I don't have that I can release that now.	No effect	No effect
	1w 4m	<p>I think that there's an awareness of how I sound and how I feel.</p>	<p>I <u>certainly feel tighter up here (larynx) and that my voice is tighter, and then when I am more relaxed. I don't have that sensation of tightness in my larynx.</u></p>	<u>No effect</u>

				<u>I'm more aware (of it).</u>	
Breath	yes	<u>no</u>	Your voice and breath are so interlinked in my mind that your breath is coming from everywhere and so is voice. <u>No effect</u>	No effect <u>No effect</u>	I sort of took a different approach rather than make him aware of where his voice was coming from in a scientific way. I shifted the focus right down to lower down here for voice and breath, and immediately he got this fabulous voice. <u>No effect</u>
Language	yes	<u>yes</u>	I've been doing it all week in fact. Instead of "try", I've been saying, "Allow your ..." It would seem to me that if you are saying to somebody, allow your tongue to go to such and such a spot, then there is less pressure on them in some way and they're not stressed out with trying to do it, they are just	It's much more fun to relax a bit about it, with the language. It's been fun for me and it's been fun for them too I think. <u>No effect</u>	It was more relevant for him to be thinking 'how does that feel', and then he could recognize when he was tightening up and where his voice was coming from. He knew then the signs for when it was tightening and when the voice was not going to be any good. <u>I think it is a much more positive approach. It's a positive thing to say it. "well just let it happen. let your tongue go to this particular spot."</u> <u>I think that for some patients, if you give them</u>

		<p>letting it happen. So it doesn't sound so effortful. "try, come on try again."</p> <p><u>A little bit of a shift. I think that rather than being dictatorial and saying 'do this, do that, put it here, work harder', I use a much gentler approach I suppose. You know, let it happen and more yeah softer not so me taking control.</u></p>			<p><u>an instruction like 'put it here' or 'now we are going to put a lot of effort into such and such', then they just go over the top, and if you use different language then they don't overdo it.</u></p> <p><u>They are much more reasonable. Because a lot of voice personalities I think are quite strange voice pathology... Well people who talk all the time.. they talk loudly all the time, they seem to be driven, if they have to use voices it is really almost impossible. That sort of personality has been really good to use a softer sort of language.</u></p>
Sensory	yes				<p>It was more relevant for him to be thinking 'how does that feel'</p> <p><u>No effect</u></p>
Perception	no	<p>i've been more aware of feeling where you actually feel things, where you are breathing or voicing.</p> <p><u>No effect</u></p>			

Specific Application	no	<u>no</u>	No effect <u>No effect</u>	No effect <u>No effect</u>	No effect <u>No effect</u>	No effect <u>No effect</u>
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Subject 4

Parameter	Shift	Brief description	Personal application	Clinical application
Voice	1w <u>4m</u>			
	yes	<p>it feels too easy though. It feels far too easy. No I s'pose it's just because I've used this voice for such a long time, to use another voice, which actually makes you feel very vulnerable, made me feel extremely vulnerable. But it felt too easy to be a good voice.</p> <p><u>By remembering to free right down here (belly), I can actually change the quality of my voice. I always just imagine</u></p>	<p>It just changed my attitude I think. It just enlightened me. It just sounds good, it just feels good. It makes people a bit more light hearted. It's bizarre. You can feel people respond to you much better.</p> <p><u>What's changed I think mostly for me is the feeling that I can get meaning on my voice. And I've been really observing how people react to the way I say something. And it made their response and</u></p>	<p>No effect</p> <p><u>Yes. (see breath below in combination with voice)</u></p>

			a big channel of air rushing from down here (belly).	the interaction better. It made me feel better.	
Physical	no	yes	No effect I've been quite aware of my body. I'm always aware of my breath – breathing right into my tummy. And like letting go of all of my muscles. It's such a release. You don't realise you are holding your bottom or you are holding your tummy. My jaw sometimes I do. I didn't realise I did it so much. When I'm annoyed, I hold my jaw. It's ever so slight but I can feel it.	No effect I feel more relaxed (when I let it go)	No effect On breath release "she was getting it so well and going right to the end and letting the whole lot go rather than stopping. She was learning to carry it right on and just letting it all go, then when she let it out – it was so much easier."
Breath	yes	yes	I'm much more aware of my breathing and it coming from	I found it much easier to employ the breathing and change my	Being aware that they might be stopping their breathing somewhere else.

		<p>my tummy. And not just that it comes from here (tummy) and stops here (throat) but that it comes out. Out of the mouth – it keeps going. I make sure my mouth is open as well. So I'm listening.</p> <p><u>By freeing my breath, remembering to free right down here (belly), I can actually change the quality of my voice.</u></p>	<p>voice much more quickly. But just practicing my breathing – you can do that while talking to other people – it's more practical.</p> <p><u>I can actually improve that and change it slightly by using this breath and the free channel.</u></p>	<p><u>I was just getting her aware of her breath flowing and I was doing yawn and sigh initially. I was just getting her to release the breath.</u></p> <p><u>And then I was trying to do some deconstruction but it didn't work, so what I did was looked at freeing the breath and using voice straight away on breath, phonating on breath.</u></p>
<p>Language</p>	<p>yes <u>yes</u></p>		<p>Yeah I like imagery. I like written, written words and pictures, but I like visual ques as well. It helps me remember.</p> <p><u>No effect</u></p>	<p>We use more of a physical “ you might feel this” or “try this” rather than saying, “imagine”. We just used to say; “ throw your voice out” and that's bad. That would mean throwing with tension. You just want to</p>

				<p>imagine something flowing out.</p> <p>I think we could use more simple language, but use imagery as well.</p> <p><u>I definitely think more about what I say with my patients.</u></p> <p><u>It was amazing how when I changed my language, I was saying 'allow your breath to flow over your tongue and out your mouth, just let it flow in and out, in and out: she could do it, she got this beautiful clear voice. It was so lovely.</u></p> <p><u>I basically asked her how she felt. Like 'how did that feel', or 'did you hear what that sounded like?'</u></p> <p><u>I would have said something like, "OK now, Breathe in", but I wouldn't have said allow the breath to flow in and out. Like from right</u></p>
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				<p><u>down here over your tongue and just let it keep on going.</u></p> <p><u>I kept bringing myself back and thinking about what I was saying and I thought: "ok let's try and... not try... what did I say... Allow the breath to move freely, just out and in and out and in and I wasn't aware of that before.</u></p>
Sensory Perception	yes	yes	<p>Keep your channels open.</p> <p>When you are listening and talking to someone, I've been noticing what other people have been doing as well as myself. I think there has been a bit of a shift. Because I've been more aware. Now I can open my channels more and it feels like I've been listening</p>	<p>I suppose my listening. I am listening more. I take in more what people say to me. I'm more aware of others as well, what they are doing and breathing. I take notice of it more.</p> <p><u>No effect</u></p>
				<p>No effect</p> <p><u>It looked like she was sinking into herself to me, then when she let it out – it was so much easier.</u></p> <p><u>Physically I definitely noticed a big difference and that has come from what I have learnt from Isobel. Like just watching her bodily reaction to how her voice sounded.</u></p>

			more.			
Specific Application	no	<u>no</u>	<u>No effect</u>			

Subject 5

Parameter	Shift	Brief description	Personal application	Clinical application
Voice	no	I had a kind of mild laryngitis. I get a lot of reflux. Yes there has been a change, but it's been for the worst. <u>I'm certainly more aware of voice in a different way as a result of the weekend.</u>	I haven't been able to explore any of it. <u>No effect</u>	<u>No effect</u> <u>No effect</u>
	yes			
Physical	yes	I guess I am much more aware of patients. I'm more aware of how they look. <u>No effect</u>	No effect That was a good lesson for me to learn as well. So when couldn't get my jaw relaxed at the workshop, it was because the harder I was trying the tenser it was getting and I think	I'm quite aware of neck posture and things like that in other people. <u>No effect</u>
	no			

Breath	yes	yes	No comment made <u>I am more aware of it. The power source for your voice.</u>	<u>it's good to keep that in mind.</u> I've been using Isobel's one -- the yawn, you know holding the yawn and then breathing through that and it very sort of open and it feels so much better. <u>You know when you (suck air) you start running out of breath. And just being aware of that</u>	(Referring to the yawn). It's interesting too that when I see voice patients and I am working with them, it helps my throat too. It's really good. <u>No effect</u>
Language	no	yes	No effect <u>Much more aware of adjectives.</u> <u>The articulation and the joy de vivre.</u> <u>The power of language.</u>	No effect <u>It extends into your everyday life aswell. Oh, only a bit more life in it.</u>	No effect <u>No effect</u>
Sensory Perception	no	yes	No effect <u>Much more auditory. Ah</u>	No effect <u>No effect</u>	No effect <u>No effect</u>

			<p><u>tactile... yeah I touch them a lot more.</u></p>		
Specific Application	no	yes	<p>No effect</p> <p><u>With Isobel, her stuff I found so good, was her work in articulation and ... that was an eye opener to me.</u></p>	<p>No effect</p> <p><u>I still probably mumble on a lot. But now I know. Having done that work with Isobel where we had to articulate our words and seeing the difference.</u></p> <p><u>I find it very good to get a point across or to get attention to be able to say something</u></p>	<p>No effect</p> <p><u>No effect</u></p>

Subject 6

Parameter	Shift	Brief description	Personal application	Clinical application
Voice	yes	My voice sounds stronger. <u>I have deliberately tried to think about soft palate elevation and that sense of being at the front</u>	No effect <u>No effect</u>	No effect <u>No effect</u>
	no	No effect	No effect	No effect
Physical	yes	<u>The whole body relaxation stuff really stuck in my mind.</u> <u>The soft palate thing and the tongue exercise and the whole body marionette kind of exercise.</u> <u>The spine roll</u>	<u>The spine roll, it gets me really relaxed</u> <u>The soft palate ones (exercises) do in that I think about the breath more here.</u>	<u>The spine roll, because it's a more physical activity it can produce a more obvious difference between tension and relaxation.</u> <u>Just because they get so tense talking to us, it gets me really relaxed because if I do it as well it almost breaks the ice.</u> <u>And the posture and the head as well. I don't</u>
	no	No effect	No effect	No effect

<p>Breath</p>	<p>yes</p>	<p>yes</p>	<p>Yeah I think I've been concentrating more on my breathing, the holding the breath thing. <u>For me, I'm probably thinking about it being more here (points to front of face).</u> <u>Maybe that's to do with the soft palate elevation or something.</u></p>	<p>I've noticed one person in particular who I have to work with... and he holds his breath when he talks, and I've been trying to consciously make him not do it in a way. To get him to try and breath and so on. <u>No effect</u></p>	<p><u>use that with patients because I don't have a complete understanding yet.</u> <u>No effect</u> <u>No effect</u></p>
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Language	yes	<u>no</u>	<p>I'm focusing more on positive comments and probably positive self comments, cause that was talked about quite a lot on the weekend.</p> <p>Another thing was that you shouldn't say to someone; 'try to do this'. Cause they will find it difficult to do.</p> <p><u>I've been trying to be more positive.</u></p>	<p>I've been thinking about that a little bit more and probably more in my personal life than in my work life saying things a bit more positively.</p> <p>My voice sounds a bit more light.</p> <p>Not light....changed, the resonance to be a bit higher. So not high pitched or anything, but just a bit less negative sounding.</p> <p><u>No effect</u></p>	<p>But I've been using that more positive kind of framing of language, when asking people to do things.</p> <p><u>That you will do this, this will happen, not let's see what happens or maybe it will happen, but this will happen and you will feel this. I use that at work. I don't know whether I'm doing it to try to make people more positive. You know how she was saying 'don't use the word, I'll try, I'll try and do this or can you do this for me'. I'll now say do this or do that. I think you get more.... I'd done that with certain populations, with patients that needed it to be more direct.</u></p>
Sensory Perception	no	<u>no</u>	<p>No effect</p> <p><u>No effect</u></p>	<p>No effect</p> <p><u>No effect</u></p>	<p>No effect</p> <p><u>No effect</u></p>
Specific	no	<u>yes</u>	<p>No effect</p>	<p>No effect</p>	<p>No effect</p>

Application			No effect	No effect	<u>(With her clients) Posture and breath would have been their main thing as well as producing louder voice. I probably added a couple of techniques form what we did.</u> <u>The only one is the image of the heat source being here where the energy is coming from.</u> <u>The picture on the belly.</u>
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Subject 7

Parameter	Shift	Brief description	Personal application	Clinical application
Voice	no	No effect	No effect	No effect
	yes	I'm more voice-aware.	No effect	I guess some of the things that I picked up from the weekend. I'm still carrying over into my

					<u>clinical practice. I'm more voice-aware.</u>
Physical	yes	<u>no</u>	I have really been a lot more aware of this jaw thing of mine. Yes, I think more of an awareness. <u>No effect</u>	An awareness of -- o god -- this is tight all the time. And for me -- even when I am sitting around or doing work and concentrating. I do this (clenches jaw and speaks through it), which means that I've got a bit of tension in here. <u>No effect</u>	(Before) I may not have asked so much about facial tension and I probably may not have asked much about neck tension in this sense, but more of tightness here (points to larynx). <u>No effect</u>
Breath	yes	<u>no</u>	I'm certainly, a bit more aware of my breathing, that was quite a big revelation for me in that workshop. <u>No effect</u>	Yeah, I get a real sense of the breathing happening down here.(belly) <u>No effect</u>	I think that I have probably been trying to incorporate some of the breathing stuff and working with this guy yesterday, I was saying about the breathing sort of powering your voice sort of stuff and getting people to sort of focus more down here. (Belly). (Before) I may not have spent so much time investigating it or sort of playing around with it.

	yes				<u>No effect</u>
Language	yes	yes	No effect <u>No effect</u>	No effect <u>No effect</u>	Yeah I saw a client yesterday and probably my questioning had changed a little bit; I said to him; "Do you ever feel....", "Does it feel like it's an effort to produce your voice. Do you feel like you have any tension here or in your face or in your neck?" <u>Yeah, saying 'How does it feel?' to that guy yesterday and I've said it to a few people recently.</u>
Sensory Perception	yes	no	I am listening to more, that definitely means that I am more kind of tuned in. <u>No effect</u>	No effect <u>No effect</u>	No effect <u>No effect</u>
Specific Application	yes	yes	No effect <u>No effect</u>	No effect <u>No effect</u>	The other thing that was useful for me in the workshop was this notion of connecting your emotion with voice. I was even talking to one of

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my clients about it. This guy was talking quite softly, and I was talking about the whole.. not just physical side if it, but the sort of psychological and emotional side of voice. And that if we have a louder voice then that can essentially expose us to revealing ourselves and revealing our emotions. So I was talking about that and he was going 'oh yeah yeah yeah.' The launch into that kind of discussion and the questions I asked him about it, probably were a result of the workshop. I may not have touched on the emotional side as before. Yeah, that was very useful. And I was saying to him, "that means we can't just focus on the whole physical side of technically how you are making your voice. You know, it goes much deeper than that and there are other facts that you may consider."

					<p>I guess it's just incorporating something that I would not normally spend so much time on. I got people <u>standing up and doing things</u> a whole lot more. <u>Just walking around the office and saying: 'look take this and just read it out loud. I just want you to walk around and just want you to stand up over there.' and it just gets them into a really different space. I guess I pulled that from that workshop. It gets them out of that comfort zone slightly, even standing up. I've probably worked on the breathing a bit more while I've got them standing up.</u></p>
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